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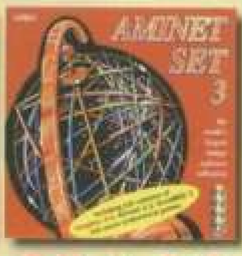
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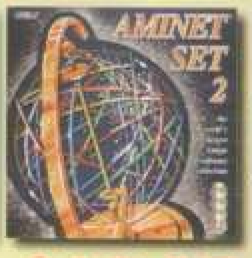
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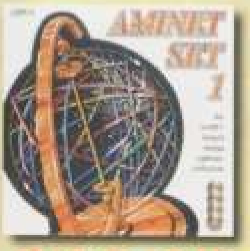
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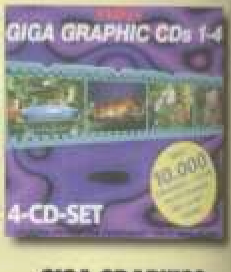
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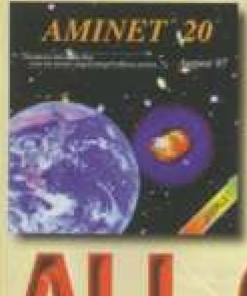

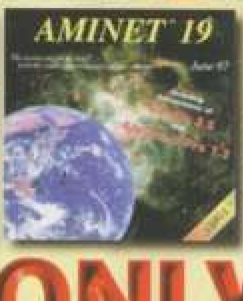

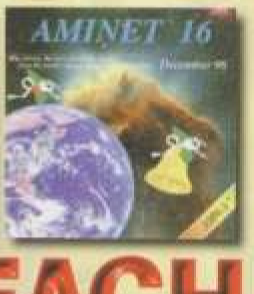

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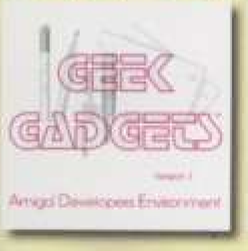
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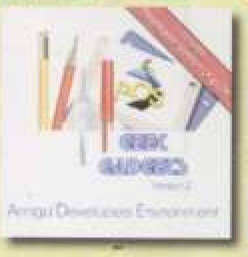
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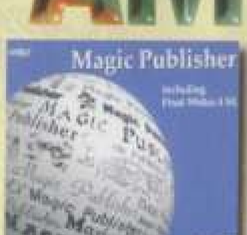
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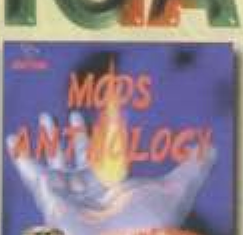
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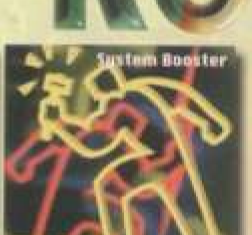
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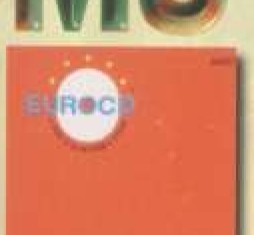
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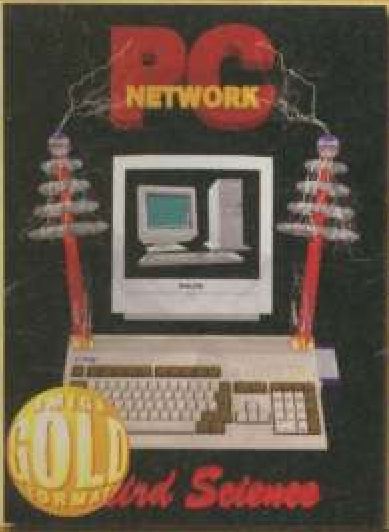
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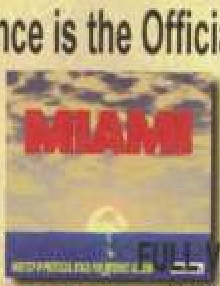

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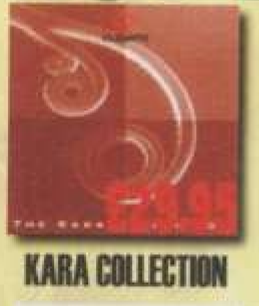
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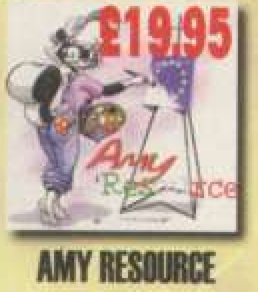
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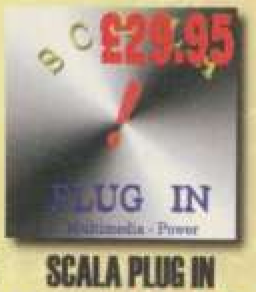
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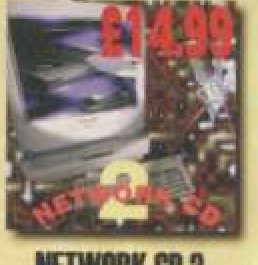
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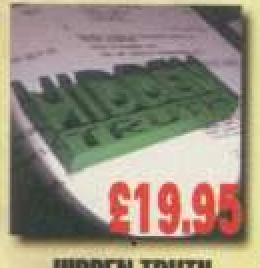
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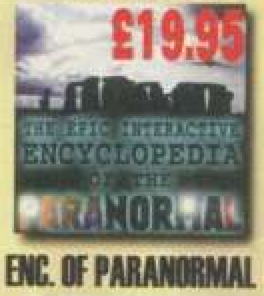
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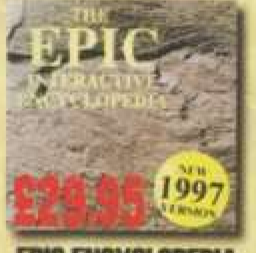
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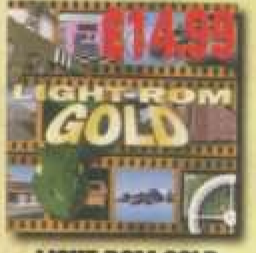
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COVER DISK AND CD-ROM DUPLICATION BY DISKXPRESS

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Editorial

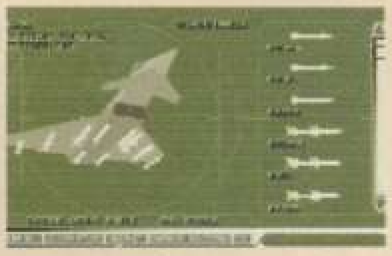
Now this is an issue and a half! Taking top billing of course is that game we thought would never see the light of day. Petitions were raised, software companies were hounded, letters were written and prayers were said. In the end it's all turned out rather well. Who could have ever dreamed you would be getting what is possibly the best Amiga game ever for under a fiver? Well that's exactly what you've got! Think of it as a thankyou for staying with us, and staying with the Amiga. It's about time we got something to really be pleased about, and I'm chuffed to be able to have been partly responsible for making it all possible. Go and play it!

Tony Horgan, Editor

Cover feature

20 T.F.X.

What can we say? We promised it, and we've delivered it: TFX is yours, complete in its entirety with the CD edition of CU Amiga. We've even got a very special offer for all you out there with no CD drive. You can get the game on no less than seven disks for the paltry sum of £3.50 plus 50p post and packing (well we could hardly stick seven disks on the front of the magazine could we?). We've got an extravagant nine page guide to it starting on page 20. It's a bit more space than we'd normally give over to a cover disk game, but we're sure you'll agree, this is no ordinary game! If you're still not convinced, just play the damn thing and you'll soon be converted to the joys of stealth missions and low level bombing raids just as we all are in the CU Amiga offices!



Feature

32 Portable Amiga

Your eyes are not deceiving you, what you see here is a portable Amiga 600. This machine is known as Suzanne and features a 28MHz 68020, CD-ROM, LCD screen, glidepoint mouse and stereo sound. The most amazing fact is that it was built as a one-off DIY project by Simon Archer of London. In this feature, Simon explains the procedure he used to build Suzanne, what problems occured and how he overcame them. Whilst this feature covers some of the DIY technique issues, it's intended as an example of what one may – with the willpower and considerable DIY ability – be able to do. It's not a DIY tutorial but we're sure you'll agree that Suzanne is a very special and very unique Amiga... Oh and she's not for sale either.

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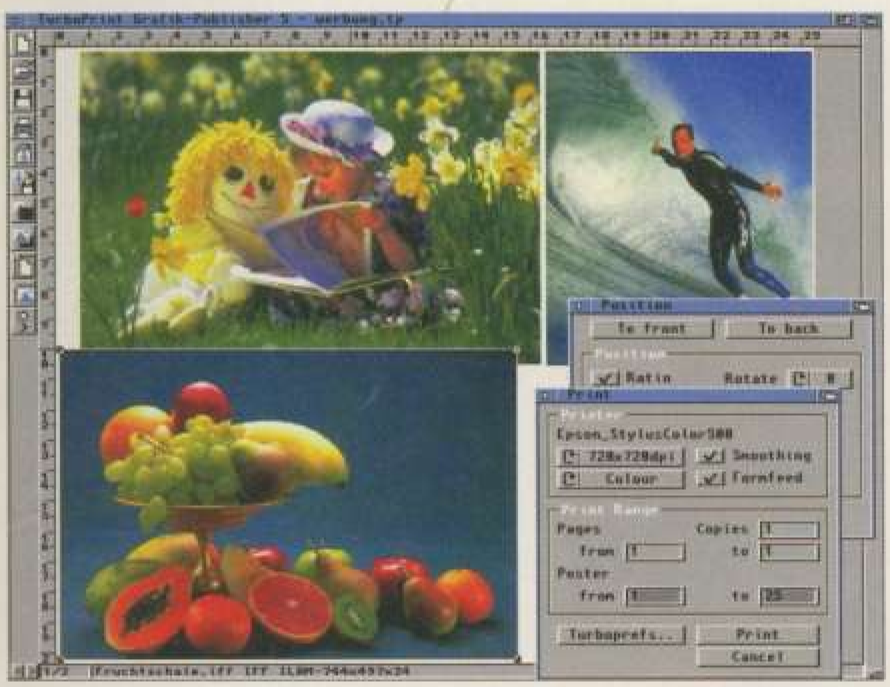
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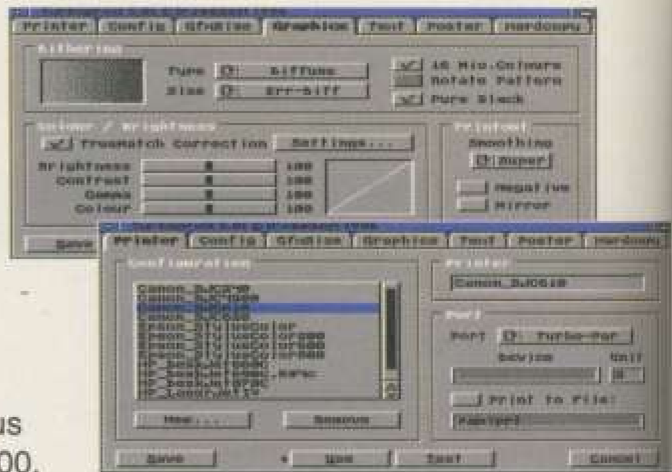
Printer
Config
Graphics
Text
Poster
Hardcopy
Type
Size
16 Mio-Colours
Rotate Pattern
Pure Black
TrueMatch Correction
Settings...
Brightness
Contrast
Gamma
Colour
Smoothing
Negative
Mirror
Save
Port
Print to File:
Save
Use
Test
Cancel

Requires an Amiga computer with **OS 2.04** or higher. Hard drive is recommended.

CU AMIGA UPGRADE VOUCHER

Please rush me a full copy of TurboPrint 5 for £35 including UK Postage & Packaging. My details are:-

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OFFER VALID WHILE STOCKS LAST.

Cheques should be payable to WIZARD DEVELOPMENTS. Price includes VAT & carriage to the UK mainland. Please add £5 for EC destinations and £10 for other countries. Subject to availability. E&OE. All sales are subject to our trading

LEGENDARY OFFER: T.F.X. ON DISK!

TOTALLY EXCLUSIVE!

No CD-ROM drive? Don't worry, because you can still get your hands on TFX! Read on for details...

Some things are just plain impossible, like squeezing TFX, the most amazing Amiga combat flight simulator every made, onto two floppy disks. We couldn't bear to see those without CD drives miss out on this, so we came up with a plan, and here it is...

We will give you the complete TFX game, on a staggering seven disks, for just £3.50 (plus 50p to cover postage and packaging). You'd have a hard job trying to find PD software elsewhere for that price!

As they're always saying on the television, 'Remember, TFX is not available in any shops, nor is it available from any other supplier'. This great offer is completely exclusive to CU Amiga, the World's best Amiga magazine.

So where's the catch? Well there isn't one! Just fill in the form on this page, cut it out and send it off to the address below (not-the normal CU Amiga address). It really is as simple as that.

TFX requires a hard drive and an AGA Amiga.

DESTROY AN ENE
THREAT

Priority order form

Send your coupon, complete with payment of £4.00 to:
CU Amiga TFX offer, PO Box 504, Leicester, LE94 0AE.
Enquiries: 01858 414742

☐ Please send me the complete TFX game on floppy disk.
Method of payment:
☐ Cheque (£ Sterling) ☐ Postal Order
☐ International Money Order

Please make cheque or postal order payable to 'Emap Images Ltd'.
Unfortunately we do not accept credit card payment.

Title ....Initials ....Surname...

Address..

....

....Postcode ....

Your daytime telephone number ....

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Do you subscribe to CU Amiga? ☐ Yes ☐ No
Tick this box if you're planning to upgrade to a CD-ROM drive. ☐

Please allow 28 days for delivery.
To avoid disappointment please send us your form as soon as possible. Stocks are limited and applications will be fulfilled on a first come first served basis.

Conditions: Order will only be accepted when accompanied by this form, taken from the October 1997 issue of CU Amiga Magazine. No copies will be accepted. This offer is limited to one per household. Multiple orders cannot be accepted.

Disk 166

AMIGA
DISK 166
Visual Prefs
Plus!
Video Easel
AMIGA

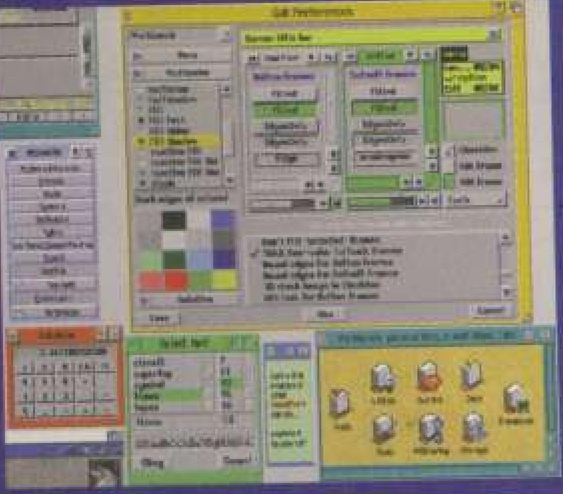
TFX wouldn't fit on the floppies so we've crammed four top applications on our two coverdisks. Wow!

Visual Prefs

Visual Prefs allows you to customise your Workbench to a very high degree. After Visual Prefs is installed, its own installer icon must be run so that it copies necessary files to Workbench. It will generally create a new preferences icon in your Workbench prefs drawer called GUI. After Visual Prefs is installed, you may delete the temporary drawer.

Visual Prefs allows changing of the colours used to draw windows and the standard gadgets found in windows also. See the accompanying screenshot for an example on what Visual Prefs is able to do. We haven't the space to document the GUI preferences program in full here, the best bet is to jump in and play with the intuitive settings and read the documentation provided with Visual Prefs. With just a bit of effort your Workbench will look totally revitalised!

It's worth noting that while Visual Prefs is fairly reliable, it is an extensive system patch. Like any system patch, it may conflict with your software or more likely, other system patches you have installed. Visual Prefs is known to not work with Pro3D and CenterTitles. If you run into problems at all, you can uninstall Visual Prefs by removing the 'Run VisualPrefs' line from your s:startup-sequence.



Loading instructions

This month we've crammed four top applications onto our two coverdisks 166 and 167. Each of them is easily installed from coverdisk 166 via Workbench. Coverdisk 166 has all of the installers so there's no need to insert coverdisk 167 until the installers ask you for that disk. Remember, access coverdisk 166 via Workbench, don't try to boot it. When you click on any of the installer icons on coverdisk 166, you'll be given a file requester where you must choose a location on your hard drive (or even RAM) where you want to install the application.

Video Easel

Video Easel is a stunning package that allows exploration of a whole range of animated 'life' type algorhythms known as 'cellular automa'. As such it's a little complex and is aimed at more experienced Amiga users, it will also require around 3Mb of fast memory free.

After Videl Easel has been installed, there's a few extra things we may need to do depending how much you plan to use Video Easel. Firstly, the directory will contain an archive called RexxMathLib.lha, and the rexxmathlib.library must be installed to your libs: directory to use the CAMRexx scripts provided. Before you do this, of course, RexxMast must be running from either your WBStartup or your user-startup-sequence. To extract the archive, go to the shell and CD to the directory where you have installed Video Easel. Then you need to type in the following;

```
lha x RexxMathLib.lha
rexxmathlib.library libs:
```

Naturally you'll need a copy of the LHA archiver but who doesn't by now? If you experience graphical problems with drawing lines, read the VideoEasle_Demo AmigaGuide documentation on install the PatchDraw patch to fix this problem. We found that this wasn't necessary on our machines. Video Easel is a highly complex package that will certainly benefit from reading the entire documentation archive provided. Here's a brief tour through making Video Easel strut its stuff. Start VideoEasel. Select the Open option in the Apps menu. Locate the file called 'Life' in the file requester and press Open. VideoEasel will ask if it's OK to clear the screen.

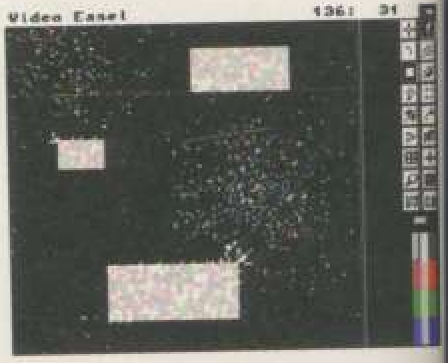
Answer OK. Select the blue colour for drawing by moving the mouse over the blue rectangle at the lower right bottom of the screen and pressing the left mouse button. Select Load from the Brush menu. Select the file glidergun.life and press Load.

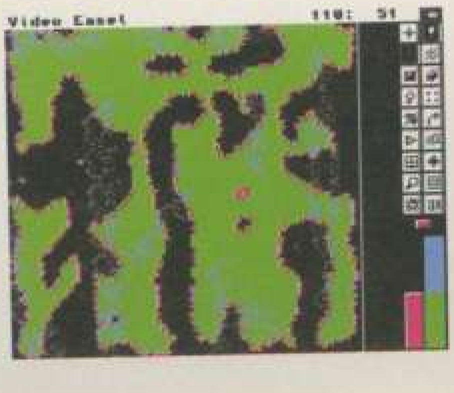
A messy shape will be attached to your mouse pointer now. Move the mouse pointer somewhere in the middle of the screen and press the left mouse button once. This will place this obstacle in the screen. Start the automa by pressing the '|>' shaped button right on the screen and see what happens. This will start the calculation of new generations of this automa.

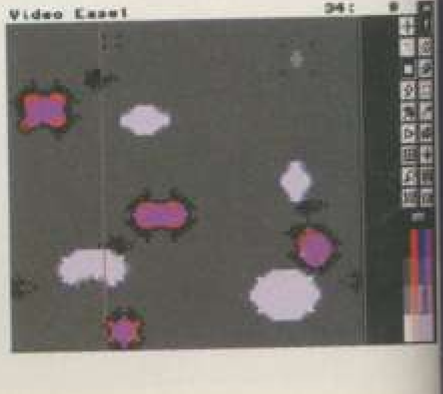
It's made more exciting by changing the speed from shortening the delay between generations. The obstacle will begin to blow up and shrink periodically and spits out a glider each several cycles of the automa. The gliders will start moving in the lower right direction. Stop the automa with the same button on the tool bar. Load another brush with the same menu and place it somewhere on the screen. Try experimenting!

Physical laws such as the 'dendrite growth' algorhythms can be modelled with cellular automa, even ferromagnetism and the gas laws are other applications. Also the propagation of sound in gas can even be simulated, in addition to the focussing of sound by an optical mirror.

See the Experiments section of the provided AmigaGuide.a





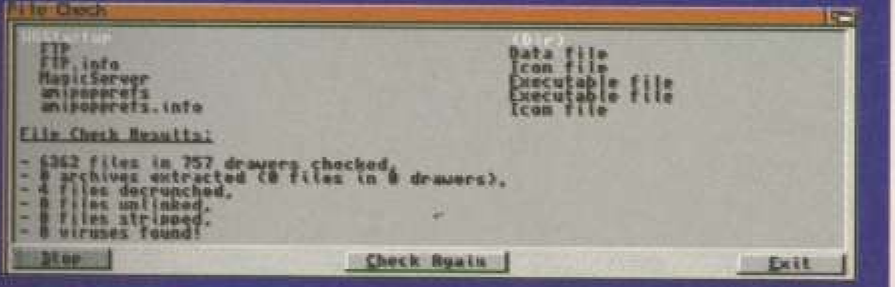


Disk 167

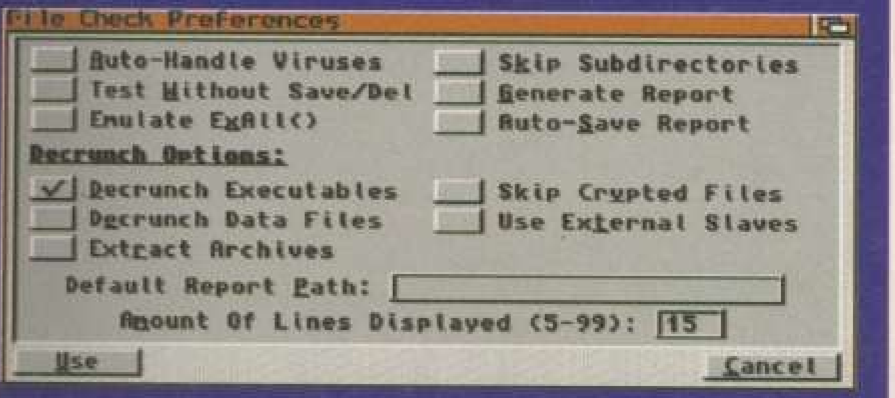
AMIGA
DISK 167
TB 303 Emulator
Virus Z
AMIGA

Virus Z

This latest version 1.39 of VirusZ will keep your drives free from destructive viruses. Even the very recent Boker, Invi Trojan, VMK 3 and Xtruder trojan viruses are fully recognised, eliminated and damage repaired. Virus Z can be installed directly where you intend it to reside, all that's required then is to click on the Install Libs icon in the newly created VirusZ directory and the new brainfile will be copied to your Workbench. VirusZ is fairly straightforward in operation and comes with good AmigaGuide help files to point you in the right direction. When first running VirusZ, it will almost certainly complain about system vectors being patched. Most often this is because of third party patches you may be running such as MultiCX or MCP. The settings menu contains the options for the various virus checking procedures. The most important is the file checking settings. VirusZ has the ability to extract compressed files to see if there's a virus hiding inside, this panel controls those settings. To check your Workbench partition, simply activate the File check option in the Project menu, select your Workbench with the filerequester, press the All button and then OK. A Window will appear showing progress and you'll be prompted to remove any found viruses, so rest easy with VirusZ.


File Check
Stop
Check Again
Exit

```
  FTP                                  Data file
  FTP.info                             Icon file
  MagicServer                          Executable file
  anipoperefs                          Executable file
  anipoperefs.info                     Icon file
File Check Results:
- 6362 files in 757 drawers checked.
- 0 archives extracted (0 files in 0 drawers).
- 4 files decrunched.
- 0 files unlinked.
- 0 files stripped.
- 0 viruses found!
```


File Check Preferences
Use
Cancel

☐ Auto-Handle Viruses ☐ Skip Subdirectories
☐ Test Without Save/Del ☐ Generate Report
☐ Emulate ExAll() ☐ Auto-Save Report

Decrunch Options:

☑ Decrunch Executables ☐ Skip Crypted Files
☐ Decrunch Data Files ☐ Use External Slaves
☐ Extract Archives

Default Report Path:

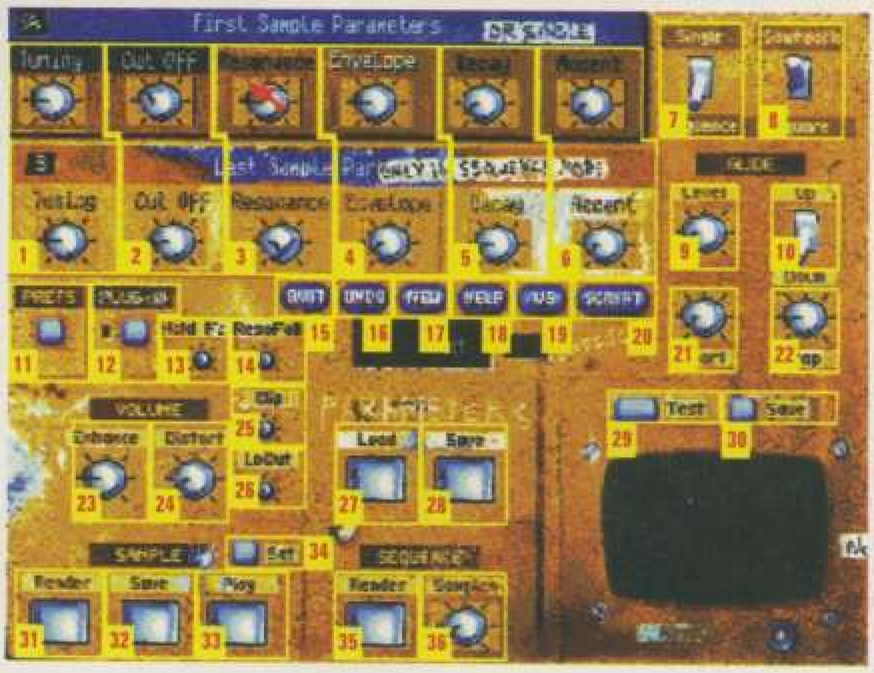
Amount Of Lines Displayed (5-99): 15

TB 303 Emulator

If you like techno, the legendary Roland TB 303 Bassline should need no introduction. For the benefit of those who are unfamiliar with this magical silver box, the 303, as it is generally known, was originally thought of as a cheesy electronic replacement for a live bass player. It wasn't until the mid '80s that people realised you could get some wild sounds from it and made the first acid house tracks. It's been discontinued for many years now, and second hand units fetch up to £1000, which is quite amazing considering the simplicity of the technology.

But you don't have to pay £1000 to get that unique 303 sound, as we've an accurate emulator on this month's disks! It works by a control panel of knobs – like the real thing – and renders samples or sequences which can be saved out as standard IFF samples. Preview the settings by pressing the spacebar, although this won't include all the effects and adjustments. Use the left and right mouse buttons to turn the knobs (use 2 and 3 especially for top sounds). See Sound Lab on page 88 for more, but for now have a play with it... and watch your bassbins.

Control guide


First Sample Parameters
Tuning
Cut Off
Resonance
Envelope
Decay
Accent
Single
Sawtooth
Sequence
Square
Last Sample Parameters
Tuning
Cut Off
Resonance
Envelope
Decay
Accent
GLIDE
Level
Up
Down
PREFS
PLUG-IN
Hold Fx
ResoFall
QUIT
UNDO
NEW
HELP
WB
SCRIPT
Start
Stop
VOLUME
Enhance
Distort
Clip
LoCut
Load
Save
Test
Save
SAMPLE
Set
SEQUENCE
Render
Save
Play
Render
Samples
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
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36

1. Sets the tuning for the note
2. Emphasises the specified frequency band
3. The amount of frequency resonance
4. Rate at which the filter closes (turn right for no filter change).
5. Sets length of the 'decay' part of the sound.
6. Defines the amount of accent.
7. Single or sequence mode.
8. Sets the source wave type.
9. How much the note will pitch bend up or down.
10. Direction of the pitch bend.
11. Opens the preferences menu.
12. Not yet implemented.
13. Look it up in the docs!
14. Resonance fall level.
15. Quit the program.
16. Undo last change made.
17. Select a new sound.
18. Brings up the help guide.
19. Switch back to Workbench.
20. Load a script to render.
21. Set the start of the sequence.
22. Set the end of the sequence.
23. Add a chorus effect.
24. Add a distortion effect.
25. Add clipping distortion.
26. Remove lower frequencies.
27. Load parameters from disk.
28. Save parameters to disk.
29. Test the current sound.
30. Save it.
31. Render the sound to RAM according to current settings.
32. Save the rendered sample.
33. Play the rendered sample.
34. Set the sample.
35. Render a sequence.
36. Set length of sequence.

CD-ROM

Super CD-ROM 15

This month's CUCD is even more amazing than normal! The full version of the legendary TFX and a 100% full 650Mb of other wonderous goodies, make up CUCD15.

Totally Exclusive!
T.F.X. On This CD!
COMPLETE GAME!
Plus
130Mb of Games
Video Easel
TB 303 Emulator
Utilities
Graphics
Modules
Web sites
Animations
PLUS
Shapeshifter and Mac Emulation Utilities
Reader Contributions
Visual Prefs
Virus Z

Welcome to CUCD15. If you haven't invested in a CD drive yet, read this to see exactly what it is that you're missing.

CUCD15 can be booted from a CD32 or an A1200/4000 with CD32 emulation. In order to use this CD from your own Workbench, you only need to click on the InitCD icon, which will then allow software to run from the CD. It initiates MUI, IDer and the NewIcons systems – don't be surprised if the look of your Workbench suddenly decides to change. The whole thing is only temporary, and it can be removed by simply clicking on InitCD again.

To help you in finding your way around, there is a DOCS.GUIDE, which will connect you to nearly all text documents, and INDEX which is a CD search tool. Just like everything else on the CD, you need to click on them to activate them.

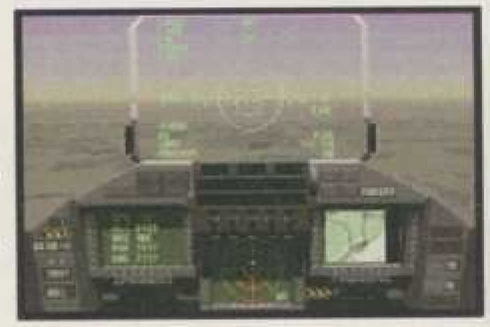
650 Mb of What?

It's easy to miss where the real contents of a CUCD lies so here's a list of how much data lies in each directory. This month our theme is ShapeShifter and games... a bumper collection of over 50Mb of ShapeShifter utilities and support files, and not to mention a whopping great 126Mb of games!
Value for money or what?

● TFX	17Mb
● ShapeShifter	53Mb
● CDsupport	67Mb
● CDROM	7Mb
● Demos	16.5Mb
● Games	126Mb
● Graphics	60Mb
● Magazine	1.5Mb
● Online	66Mb
● Previews	25Mb
● Programming	37Mb
● Readers	33Mb
● Sound	44Mb
● Utilities	34Mb
● WWW	32Mb

Highlights

TFX



CU Amiga's gaming coup de grace, the full version of Ocean/DID's unreleased TFX flight simulator. This state of the art game can be found in its entirety on the CD with versions for standard Amigas, those fitted with FPUs and 68040 machines. You'll even find a drawer of files which are ready to copy onto 720K PC floppy disks if you're using this special CD from a PC compatible. Installation to hard drive can be performed with the provided installer script or dragging of the TFX directory. Wow!

On the floppies

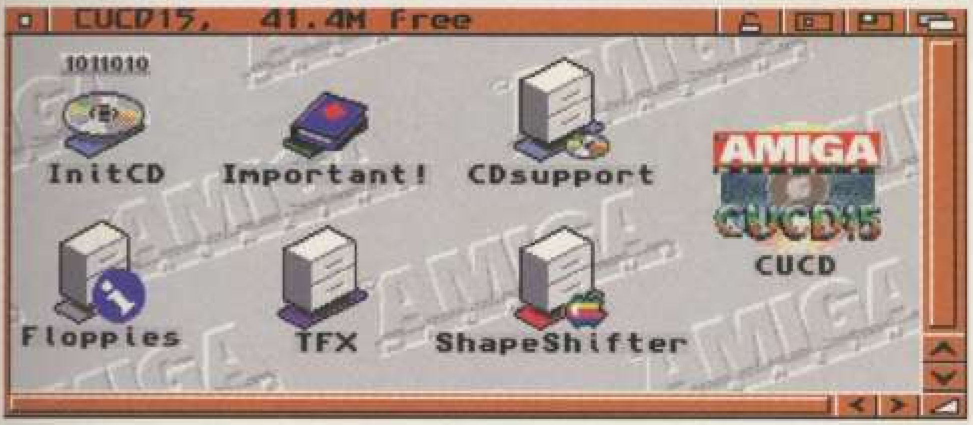
This directory carries the contents of the floppy disks from the floppy issue of CU Amiga. This month we've included 4 enthralling utilities, Video Easle for interesting life algorthym animations, Virtual303 for a TB303 synthesizer emulator, VisualPrefs to customise your Workbench beyond the norm and VirusZ to keep your Amiga safe from viruses.

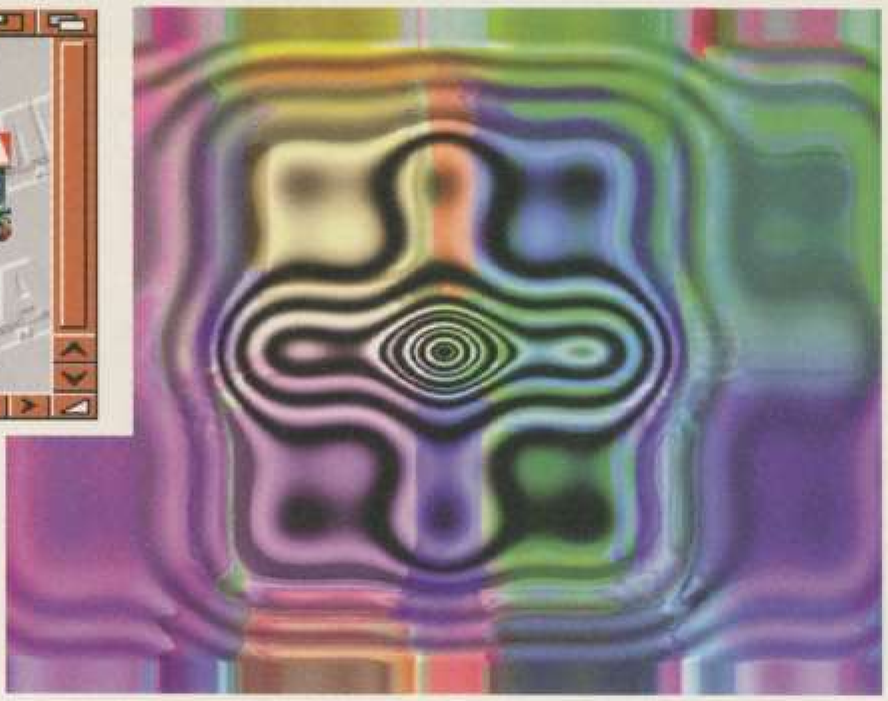
IDer explanation

Reaction to IDer on CUCDs has been a mixed bag of criticism and praise. Much of the problems have been caused by a lack of understanding of what IDer is for and failure to click on the essential InitCD icon. This month we have made some changes to the IDer launcher to work around the teething problems so that this system is more fool proof.

For those that missed it, most project icons on CUCDs now have IDer as the default tool. IDer allows *you* to choose exactly what viewers and players you wish to use for specific types of files. Graphics card users may display all pictures on current and future CUCDs with a hi-resolution viewer, for example. Your preferences are saved to your hard drive. This month, we've moved the CDsupport drawer to the root of CUCD15 and added an 'Inportant!' readme as well. If you've customised your CD preferences but left some of the viewers on CD, you'll need to change your IDer prefs to point to the new directory. Simply delete the 'System' part of the path so 'CUCD:System/CDsupport/xxx' becomes 'CUCD:CDsupport/xxx'. The CUCD preferences program can now be found in the top left of the CDsupport drawer.

What's in your drawers?





Root: As previously mentioned, the CDsupport drawer can now be found in the root. The standard Workbench drawers icons have vanished (though the drawers remain) to be replaced with the CDsupport drawer and an opening Readme file. TFX, the ShapeShifter theme drawer and the main CUCD icon can be found here.

TFX: If you don't know what TFX is, greetings from planet Earth! Instead of reading this, you could be playing the Amiga's ultimate legendary flight sim. Go play!

Floppies: We like the letter V this month. So the floppy disks contain Video Easle, Visual Prefs, Virtual 303 and Virus Z. Naturally they're all found ready to run in this drawer.

ShapeShifter: A bumper collection of ShapeShifter and Macintosh emulation utilities. The latest ShapeShifter 3.8, Video drivers, utilities and MacOS 7.0.1 bootfile and System 7.5.3 updater.

CDsupport: The vital support files for the CD; viewers, players, IDer and not forgetting the obligatory CUCDprefs program.

CUCD: This is where the vast majority of the CD hides. What wonders can be found within...

CDROM: The latest AmiCDFS, Aminet CD indexes, CD ID collection and two audio CD player utilities.

Demos: AGA and ECS offerings to swirl your plasma and rotate your 3D world. Turn the lights low, crank your stereo and enjoy!

Game: This month's second theme is gaming, thanks to TFX, and there's enough games and game add-ons on CUCD15 to keep you going for a LONG time. A fixed Shadow of the Third Moon is an essential check-out.

Graphics: Anims, converters, viewers, utilities; CyberAnim, Gallery, Icons, PhotoAlbum, Picasso96 and much, much more graphical delights for you.

Watch Out !
WHACK!
AMIGAPower

Magazine: Patch Amiga Basic and Amiga Basic to ASCII tie-ins to the Q&A questions this month. Also the database of CU Amiga issues.

Online: The new Eucalyptus E-mail beta package, the superb Weather Experience (as covered in Wired World) are just a couple of the comms tid bits.

Previews: Digital Quill and Digital Universe demos, plus a ClickBoom! special with a Myst preview and... the blindingly good OnEscapee demo!

Programming: Code of all shapes and forms from the CManual, MUIRexx library, latest ixemul libraries and dev package should keep the coders happy.

Readers: A wicked collection of games, utilities, pictures and modules from our own, wonderfully talented readers. Gee, you guys are just great!

Sound: All things sonic and noisey from the latest brilliant AlgoMusic 2.2, HippoPlayer, MIDI files, MP3 encoder and the latest player and so on, and so on...

Utilities: Those random little gems that make the Amiga what it is. The latest MCP beta, Diavolo demo, RCS, VDisk and more.

WWW: The big three web browsers, AWeb II 3.0, IBrowse 1.12 and Voyager-NG demos. This is only made complete with an on-disk mirror of the one and only CU Online!

Disk doesn't load?

If your CD does not load contact DiskXpress on 01451 810788. If they advise that the CD is faulty send it along with a SAE to: CU Amiga Magazine Disk Returns, DiskXpress, 7 Willow Court, Bourton Industrial Park, Bourton on the water, Gloucestershire GL54 2HQ.

Please note that some CDs will not autoboot on systems other than CD32s, so try loading it from Workbench first. CUCDs will work with almost all Amiga configurations and filesystems. However, we recommend older CD filesystems be replaced where possible. A non-working program is *not* an indication of a faulty CD!

Siamese

S Y S T E M S

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Case design is diferent.

Siamese PC with RTG v2.1 features !!

- *Use PC graphics card as an **Amiga RTG graphics** display. Each Intuition friendly program opens in a seperate PC Window upto 256 colours &1024 x 768 (higher with 4mb graphics upgrade). You can also have **24 bit backdrops & Video** on workbench.*
- *Siamese RTG uses Zero Amiga ram for display in any resolution.*
- *Amiga can use the **16bit CD quality sound** card in the PC, including Wave sound generator.*
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- *Perfect for **Video producers** moving from Amiga based Analogue to Digital production methods.*

All this for only £799.95 inc Vat, ex P&P

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Siamese PC's include the following components.... Cyrix 166mhz processor, 512k cache motherboard, 16mb EDO ram, 1.7gb drive, 1.44mb Floppy drive, 16bit sound card, 4mb s3d 64bit PCI graphics card, Keyboard, Mouse, Windows 95, CE approved Mini Tower case. Amiga components:- Hydra pcmcia ethernet card, Siamese v2.1 Software (no switcher).

Siamese upgrade packs . . .
. . . for Amiga / PC owners.

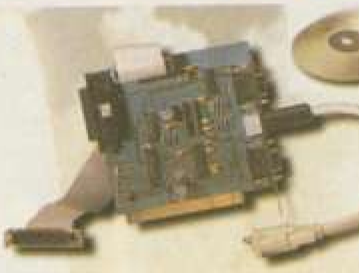
Siamese RTG

!! Software only v2.1 !!

Supports optional High speed Ethernet network.

"the diference to the SiameseRTG was astounding"
Mat Bettinson CU Amiga

Launch special only £ 99.95



Siamese Video Switcher

Original Switcher card and cable kit for use with the Siamese PC pack above and Siamese RTG v2.1 software only pack.

£99.95

includes Siamese v1.5 software.

Still not convinced, then take the Video Challenge.

Buy the Siamese Video or Siamese MPeg CD for £5 inc P&P. Then if you want to buy the Siamese system we will refund double the CD / Video price from your Siamese order. Don't wait, buy it TODAY !

Siamese / Hydra Ethernet Card A1200 (pcmcia) - £149.95, A2/3/4000 - £169.95

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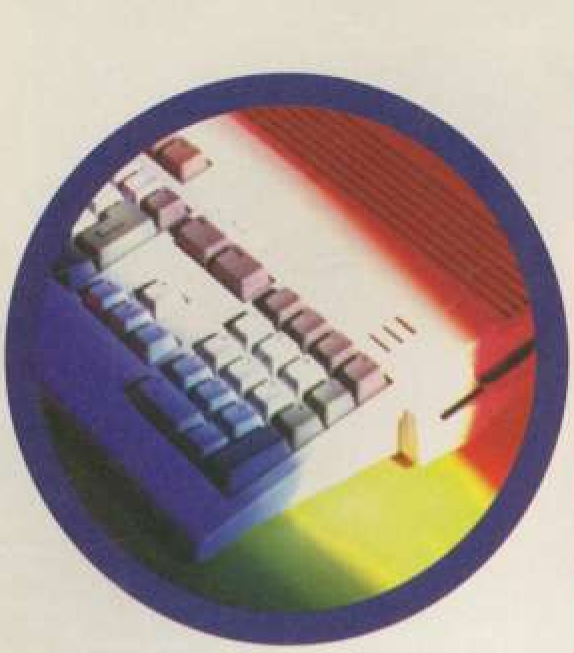

News

Gateway 2000 – Progress at last

After a few months of behind the scenes dealings and growing impatience from the Amiga community, things are beginning to look very good for Gateway 2000 and Amiga International.

Gateway 2000 have set up another subsidiary called Amiga, Inc. which will be based in Dakota. Running alongside the German based Amiga International, this company will be primarily concerned with the future development of the Amiga, leaving the sales and marketing aspects of the operation to Petro Tyschtschenko and Amiga International.

The new General Manager of Amiga Inc. is Jeff Schindler, a Gateway 2000 man with a background in engineering and a knowledge of Commodore products. Amiga Inc. have started the hiring process and hope to have 30 staff in place and developing by Christmas. According to Petro Tyschtschenko there should be a new Workbench 3.5 OS update released by the spring of next year at the latest, and new hardware by the winter of '98.

Initial development work will go into urgent updates of the OS, but there will, despite rumours to the contrary, be hardware developments. It has yet to be decided whether this hardware will be produced and sold by Amiga International or whether it will be licensed for construction to third party companies.

AI will be making their presence felt in the Cologne show in a big way. Held from the 14th to the 16th of November, this German show has traditionally been the biggest Amiga show in the world. AI will have a large stand and hope to show off some newly licensed products. They will also hold a developer's conference, seminars and an exchange of ideas with Amiga companies, developers and users.

A recent summit held by Amiga Inc. was attended by our US correspondent Jason Compton.
For full details see page 18.

Golden Image get ConneXion

Golden Image are offering a new Zorro Ethernet solution, the ConneXion card. This networking solution provides a 10 base 2 BNC Ethernet link. Using the AUI interface, a standard AUI transceiver allows adaption to alternative standards such as 10 base T.
The card comes with autobooting ROM based software called Netzwork, negating the need to install separate drivers. Netzwork software is currently running on Amiga and DOS systems, with Windows, OS/2 and Novell versions under development. Sana II compatibility is also provided, using additional driver software.
The ConneXion card runs at a standard 10Mbits per second, but benefits from a 32k on board cache reduce CPU overheads. The card is available now for £175. Call Golden Image on +44 (181) 900 9291.

Micronik North American distribution announced

Micronik of Germany, suddenly a super-high profile Amiga licensee, has chosen 'North American' Distributors for its new Amiga clones. According to sources within Micronik, Paxtron Corp. and GVP-M have been selected. Both companies plan to offer direct sales as well as dealer channel sourcing.

The move should finally bring reasonably-priced A1200 tower systems to the US and Canada. While tower kit imports have been done in the past, they have typically been in very short supply and expensive. GVP-M projected prices between $750 and $1250 for the Micronik units, depending on configuration.

Reach Paxtron online at www.paxtron.com. GVP-M are at www.gvp-m.com. And Software Hut at www.softhut.com.

Magazine shake-up: Two titles close

CU Amiga becomes UK's biggest seller

There has been mixed news on the Amiga magazine front. The last month has seen the closure of two more UK Amiga Magazines, Amiga Review, the black and white mail order only title, and Amiga Computing, the glossy newsstand title which for so long was a valued alternative to the big two of CU Amiga and Amiga Format.

Amiga Computing's demise has been widely attributed to their decision to stick to floppy disk only cover mounts. Editor Neil Mohr told us that he felt the management had not taken enough steps to make the title competitive in a market which has become increasingly difficult. Apparently AC had been selling about 8,000 copies a month and running at a small profit, but publishers IDG considered it time to move on to more profitable areas. Amiga Computing was held in high regard at CU Amiga, and we're sorry to see it go. Our best wishes for the future go to all at AC.

On a more positive note, the latest official circulation figures for UK magazines have been published by the ABC auditing organisation. CU Amiga's circulation has dropped by a mere 2.7%, healthier than the recent 22-28% drops the sector has suffered. CU Amiga outsells any other Amiga magazine in the UK/Republic of Ireland, and is the UK magazine of choice worldwide, selected by newsstand purchasers over 10% more often than our nearest rival.

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PPC gets even faster!

New 'quarter micron' manufacturing processes have allowed Motorola to offer the PPC604e chip to run at an amazing 350MHz.

The 200MHz version of this chip is at the heart of the top of the range PPC boards from Phase5, and although they have not yet made any statement on the matter, it seems likely that they will support this chip in the future. Assuming a megabyte of L2 cache, the 604e/350 is benchmarked at an amazing 14.6 SPECint95 and 9.0 SPECfp95, making it the fastest high volume CPU available today.

Also announced is the new low power consumption PPC 750/740 series of processors. Utilising an integrated level 2 cache controller, and 32Kb data and instruction caches, the 266MHz 750 is rated at an estimated 12.4 SPECint95 and 8.4 SPECfp95.

PowerPC
MPC603e
THOMSON-CSF
SEMICONDUCTEURS SPECIFIQUES
9721
TSPC603EVAU3L

Made for KiDS

Mystique software has announced an initiative to promote the use of the Amiga as a family computing platform by encouraging and organising support for software aimed at children. The web site can be visited at http://www.mystcorp.u-net.com/madeforkids.html.

The main aims of the Made for KiDS project are to:

- Gather together a range of quality Amiga Software for children.
- Make this range available through a new section of the Aminet – misc/kids
- Promote use and development of Amiga software for children
- Ensure next generation Amigas can compete with the PC as a family computer.

Made For KiDS

Imagine add-on released

GOC publishing have recently announced the imminent release of ImaginEX, which is an add-on for the popular Imagine rendering package. Combining a broad selection of presets and templates, ImaginEX promises to significantly improve the often criticised working environment of Imagine.

Designed to be compatible with all versions of Imagine, ImaginEX contains features such as a scroller gadget to allow easy selection of groups, objects, faces and points, including multiple selection, and two quick rendering presets called 'pixel burners' designed for ultra fast previews.

ImaginEX will be sold direct from GOC publishing for £24.99 including a full manual with a leather look binding. As an introductory offer, GOC are offering ImaginEX to their first 200 customers at a discount £15. Expect to see a review of this product in the near future.

GOC Publishing can be contacted by post at: 71 Helmsley, Willerby Road, Hull, HU5 5ED, UK or by telephone on +44 (0)1482 500597

News in Brief

Weird Science sell clones

Weird Science's new hardware showroom has opened, selling an assortment of accelerators, CD-ROM drives, towers and add-ons for Amiga users on the upgrade path. Amongst products are the new range of tower Amiga clones from Micronik. The 1300 is priced at £349.95, the 1400 with Zorro2 at £469.95 and the 1500 at £599.95. Weird Science sell these towers with 8 speed CD-ROM drive and a 1Gb hard drive for an extra £150. Weird Science can be contacted on +44 (0)116 246 3800

ClickBOOM introduce on-line shopping

ClickBOOM's parent company, PXL computers, has introduced an 'on-line shopping mall' from which Internet users can purchase the company's products and a select range of other titles. The web-based mall was introduced in response to the problems Amiga users worldwide have in locating stockists. Clickboom promise promotions and competitions for visitors to their website. Clickboom can be found at http://www.clickboom.com

Vulcan open US branch

Vulcan software have opened a US branch to cope with North American distribution of their products. Vulcan, the games company behind the Valhalla series and titles such as Hillsea Lido, Jet Pilot, Burnout and Strangers AGA are expecting to release some major titles over the next few months. Contact Vulcan UK on +44 (0)1705 670269 and Vulcan America on 1-800-426-7687.

Sidewinder CD price shock(er)

Sidewinder has cut the price on direct sales of his Future Shock II CD to $10, plus $2 shipping worldwide. The 74-minute disc has a few of his favourite and more popular tunes, including the title track to the shareware game Scorched Tanks. Sidewinder has had his music played at dance clubs (due to the techno nature of his music) and at cowboy bars (as he's wearing a cowboy hat on the back cover). CDs are in limited supply at this low price. Contact Sidewinder Productions: 8611 Cape Valley San Antonio, TX 78227 USA.

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AMIGA 1200
170 MB
AMIGA MAGIC

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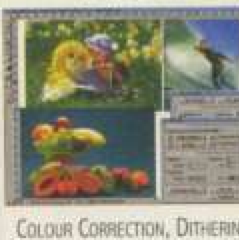

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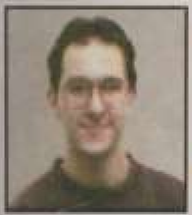


Stateside News

by Jason Compton: **Jason Compton is Editor in Chief of Amiga Report Magazine**

More Amiga Shows

The expo scene has been a little sluggish in 1997, although Amiga, Inc's Darrick Lisle hopes to change that very soon by supporting the upcoming Amiga events and planning a blast in Gateway's home town within the next 6-12 months. Rumours of a winter show in Toronto are surfacing, but the Ohio Midwest Amiga Expo is the only show that looks to actually happen this fall, although some smaller user group events are always going on

The problem in the States is that a user group show can easily be thousands of miles away from a pocket of users who would want to go – I'm sure the Amiga users in Toronto would love to hang out with users from California, but the mileage is just too much.

Peace breaks out

It was thought for a while that sparks might fly between Amiga, Inc., QuikPak, and Lotus Pacific. Instead, however, all indications are that Amiga will be coming to mutually beneficial agreements with the two parties whose businesses rely on the Amiga technology.

As you may remember, QuikPak produced the A4000T in the US, fabricating parts and motherboards and assembling the machines for sale in the US and abroad. (Often, the motherboard was provided to Eagle for conversion into a much more attractive tower case.)

QuikPak has almost disappeared from the public eye since Gateway bought Amiga. Details are sketchy, but it seems to relate to a dispute with the Escom bankruptcy estate for services rendered and money owed. In a recent statement, QuikPak indicated that they would meet with Amiga, Inc. to iron out an agreement that would allow QuikPak to move ahead with their long-promised A4000-based portables and a low-end model they have designated as the '1630'.

Lotus Pacific acquired the Chinese rights to the Amiga from Rightiming in a deal Amiga, Inc. immediately challenged. However, indications there too are that Lotus Pacific and Amiga may be able to reach a solution without a long costly battle.

Rightiming claimed to have procured a license from Escom (the so-called 'Chinese deal' we heard about), but Amiga, Inc. maintained that the Gateway purchase was for the worldwide rights to the technology. In the meantime, the Chinese have begun promoting the Wonder TV A6000, their Amiga-based entry into the Chinese set-top market.

Change isn't necessarily bad. After all it's living during the stagnant times that drives people mad.

The 'Zine scene

Amiga news sources here in the States have undergone some changes lately. The loss of Amiga Computing was felt here as well, as IDG had a special 'US Edition' of AC to replace Amiga World, which it closed just before Escom bought out the Amiga. The US Edition never got up to speed here, plagued by distribution and production problems from the outset.

Amazing Computing, the world's longest running Amiga magazine, is still managing to keep ticking along as our only native monthly, and there is a young turk called the Informer who has made some waves as a bi-monthly. Of course, many choose to pick up CU from a dealer or bookstore for the expanded coverage (Amazing and Informer are shorter than CU) or for the cover CDs and floppies which American magazines don't offer.

Addendum

Project XG

Maplin's address is as follows;
Maplin MPS, PO BOX 777, Rayleigh, Essex, SS6 8LU. 01702-554000

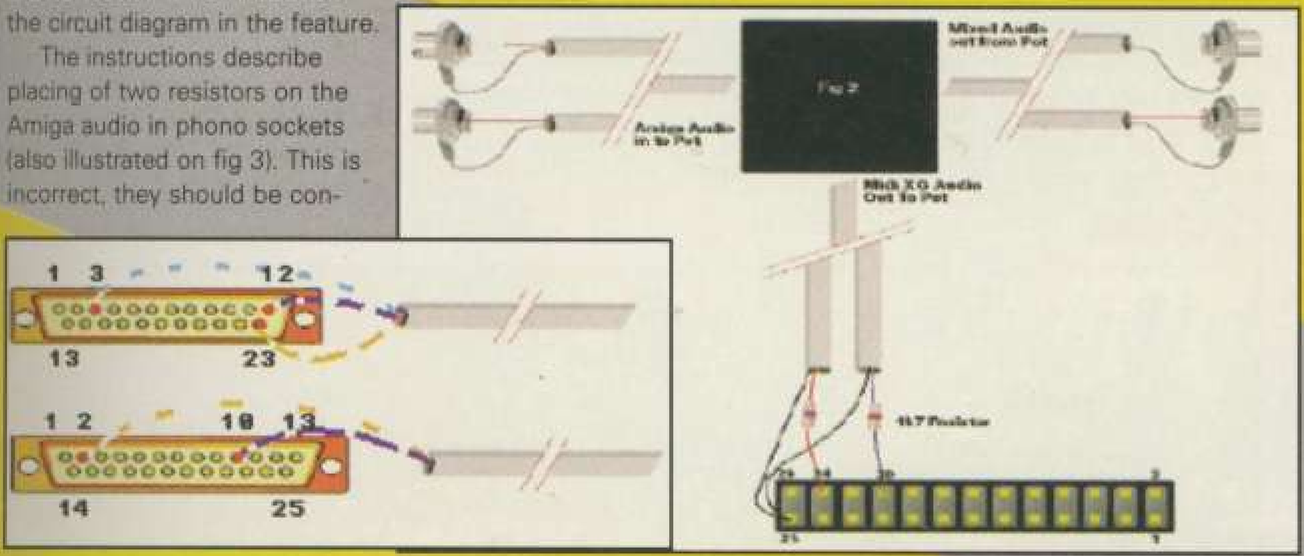
The case should be a Verobox 305, order code LH51F at £4.58 + VAT. That adds £1.02 to the total, making £19.87. Don't worry about the incorrect price for the 10K pot, the price is correct on the total.

Figure 3 has a few errors. Here is the correction which matches the circuit diagram in the feature.

The instructions describe placing of two resistors on the Amiga audio in phono sockets (also illustrated on fig 3). This is incorrect, they should be connected to pins 24 and 20 on the DB50XG header. The audio wires going to the volume control from those pins should be attached to the other end of these resistors. Use tape to insulate the exposed resistors leads.

The diagram here for the 25 pin serial and 23 pin disk drive connectors are viewed from the solder side. Connected pins are marked in red. There's been some confusion about the pin numbering on the DB50XG. Pin 1 is nearest the corner of the board. Odd numbered pins are towards the outside of the card and even pins are inside. Please note, the IC socket has been illustrated upside down, as you'd solder on to it (unlike the DB50XG header). Check the notch on the IC between pins 1 and 14 for orientation.

We apologise for the errors in the feature. Our future DIY features will be more clear, easier to construct and yet every bit as amazing as Project XG.



Next month's project will be 'AIR Link' and we'll be taking the revolutionary step of covermounting the PCB and working closely with an electronic kit company to tailor the parts and box specifically to the Amiga. Your Amiga will take control of your remote control appliances and be controlled with any of their remote controls. AIR Link only with CU Amiga, don't miss it!

Vista Pro fix

It has transpired that on some systems when Vista Pro is launched from an RTG (graphics board) screen, the program will exit without any error reports. The solution is to temporarily change Workbench to a native screen mode and then launch the program as normal.

There's also a fault with a script file which launches Vista Pro This affects only those with no FPU on their Amiga. In the Vista Pro directory, there will be a file called VistaPro3.0. Edit this AmigaDOS script with a text editor (type 'Ed VistaPro3.0' from a shell) and move the Stack 300000 command to the top and change it to Stack 50000. Please accept our sincere apologies for the problem!

Amiga, Inc. Summit

In mid-August, Gateway 2000's new subsidiary Amiga, Inc. held a summit at Gateway's USA headquarters. Our US correspondant Jason Compton was invited to attend this historic event.

Jeff Schindler, General Manager of Amiga, Inc., the new wholly-owned subsidiary of Gateway 2000, is a man who knows how to listen. Jeff, along with Petro Tyschtschenko and Schindler's assistant James Tippetts hosted a summit with seven noted members of the American Amiga community.

The bulk of the guests were from the ICOA – the Industry Council of the Open Amiga. This group is an independent body set up to promote a series of standards with the hope that they can avoid division and over diversification in the Amiga industry. Gateway 2000 has shown a lot of interest in the ICOA and, if nothing else, this summit will show that the new owners of the Amiga are more than willing to listen.

Of the Seven guests, five were directors of the ICOA, one was Amiga's unofficial first engineering hire, and one was our man in America, Jason Compton, editor of Amiga Report Magazine. Jason takes up the story.

Cast of characters

"Some of the names will be immediately recognisable by Amiga fans – Andy Finkel, of Commodore-era AmigaOS development fame and Dean K. Brown (the DKB in American Amiga hardware manufacturer DKB) were the veteran standouts. Alain Penders, Vice President of Finale Development software, Jess McCluskey, a Boeing engineer, and Fleecy Moss, a contract systems designer rounded out the group of five.

The final attendee might be the least famous. Joe Torre – a hardware engineer who has worked for a number of firms, most recently Scientific Atlanta – is unofficially Amiga, Inc's first roster entry on the engineering team. Joe has designed custom accelerators for Atlanta-area Amiga video professionals around the 020 and 030 chips, including multi-FPU configurations for superfast rendering.

I spent alot of time with Joe over the weekend, as we were already acquainted from my involvement with the Amiga Atlanta user group. Joe has a great deal of vision for the Amiga, and a lot of respect for his past. So much, that he pointed out instances of 'incorrect' boing balls – apparently Joe has the specs of the 'real' boing ball from Dale Luck, who created the logo".

Another name that might need some introduction is Jeff Schindler. As the head of Amiga, Inc, he will be deciding the future course of the Amiga, so we will all be hearing a lot about him over the coming months. He has been something of a question mark, so here's the 50p bio: Originally an engineer, Jeff Schindler worked in computer sales in the early 80s, owning Commodore Vic 20 and 64 computers.

The highlight of his tenure with Gateway was successful leadership of the team that designed the Destination big-screen TV PC–call it a marketing ploy if you will, but the Destination, bundled with a high-quality TV/monitor and hi-fi stereo sound has gone over very well with people looking for a classy family PC. Now that the cast is in place, let's get back to Jason.

"While I was not a part of the ICOA meeting with Gateway (instead, I was involved in an informal marketing discussion with Petro, James, and new Amiga, Inc. hire Darrick Lisle), I did help the group brainstorming session. Amiga, Inc. and the ICOA want to find ways to work together, and from what I gathered, they felt very confident that this would happen in the near future. Most seemed impressed by the advanced levels of planning at Amiga, Inc. – proving once again that even if they don't inundate you with press releases, a company can really have their act together.

GATEWAY2000

▲ **From left to right – Joe Torre, Alain Penders, Fleecy Moss (yes, that is his real name), Dean Brown, Jess McClusky and Andy Finkle.**

▲ **Jeff Schindler takes the guys for a boat trip. Looks like Fleecy only just got up...**

▲ **Jeff Schindler at the helm – a pensive Petro tries to get used to the idea of staying afloat.**

Big building

James Tippetts treated all of us to a first-hand look at the new Amiga facilities. Anyone who needed convincing about the commitment the new company would have been pleased with what we saw. The first office will be nothing special – two large rooms plus a lounge on the second floor of a two-story office building located in the 'Gateway park'. No windows, overhead fluorescent lighting, but it is being made liveable. I set up the office's first Amiga, a stock A1200 with a 13" kitchen colour TV (a temporary configuration, to say the least).

Projected for October 1st completion is what can only be called 'the big building'. Amiga, Inc. was able to get a lease of 3/4 of the building for a song. It's a beautiful thing even in it's half-finished state – lots of windows, very airy, and very visible from the highway, spurring a number of us to propose massive 'Amiga' signs on the roof.

On the Wednesday night, after the ICOA directors left, I met with Steve Johns, who helped make the Amiga deal happen for Gateway. He wished us all well. The Amiga is still finding its footing with the new Amiga, Inc., but the people there are genuinely trying very hard to make things happen.

At one point, James Tippets expressed amazement at the amount of work he and Jeff had done to get Amiga, Inc. up and rolling more or less on their own – 'running around like chickens with our heads cut off' – and wondered if anybody else had it easier. I assured him that no, I was pretty sure that any company, any effort big or small, always starts with a few people working like mad to make a dream come together.

That's what I saw, and I came away from there thinking that we're going to be in for something really-good here". ■

Jason Compton

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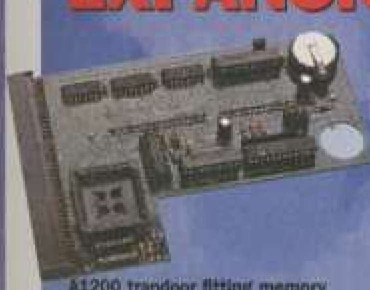

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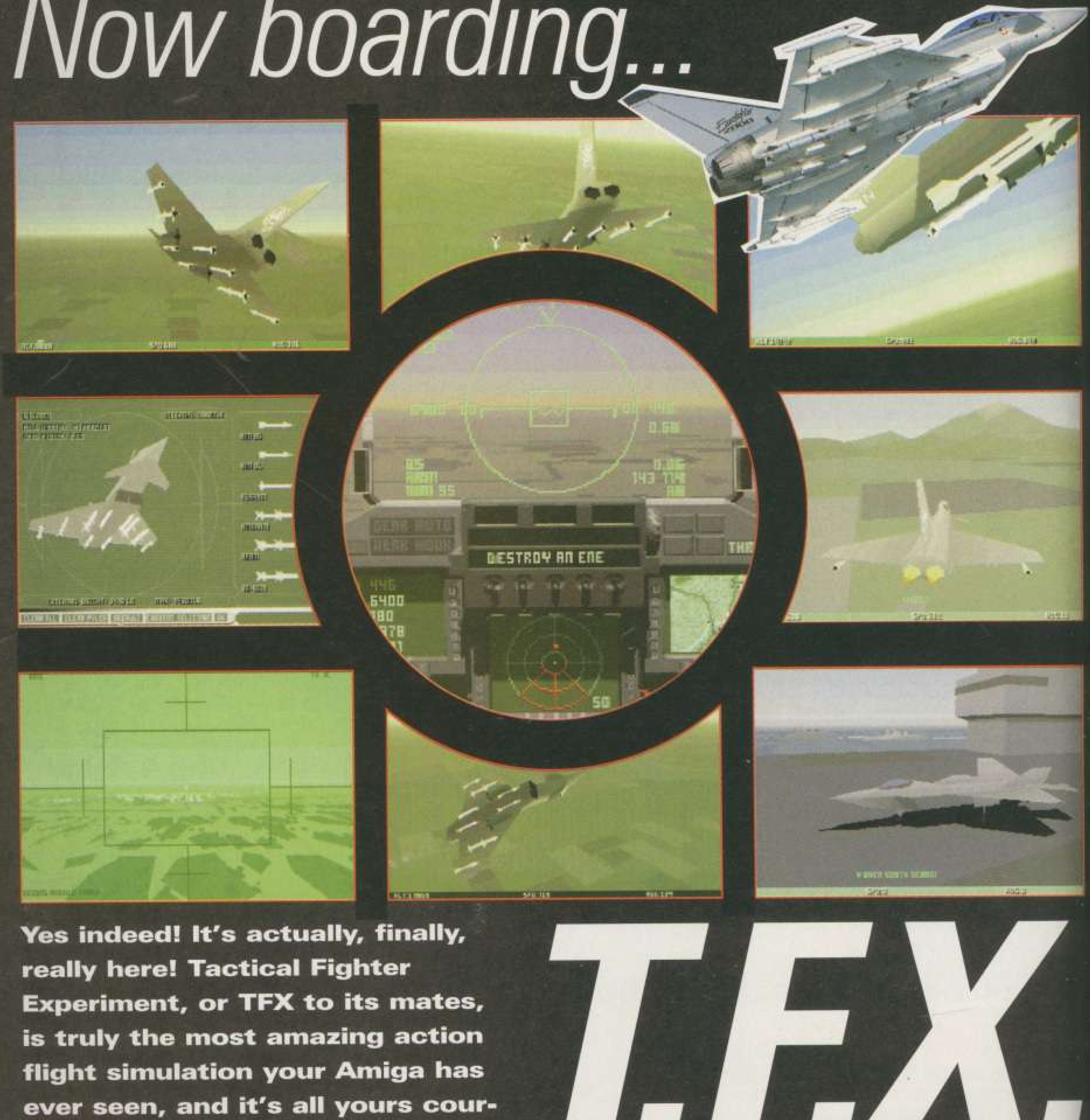
Now boarding...



T.F.X.

Yes indeed! It's actually, finally, really here! Tactical Fighter Experiment, or TFX to its mates, is truly the most amazing action flight simulation your Amiga has ever seen, and it's all yours courtesy of CU Amiga Magazine.

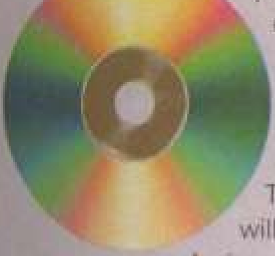
For those who just can't wait to get airborne there's a quickstart guide on page 22. You'll find more in depth information on the following pages. But first, just what is TFX and how come we've given it to you?

Those with abnormally good memories will recall TFX made its first appearance in CU Amiga back in May '93. You're forgiven for it having slipped your mind, as it was called Inferno at the time. Its developers DID had recently delivered the excellent F-29 Retaliator (rather later than planned), and Inferno was being touted as the first of a new generation of flight simulations. DID told us it would be released in October, meaning of course October 1993. Somewhat suspicious since the delays with F-29 Retaliator, we rather optimistically commented "but if we know DID, that's probably October 1995!". Little did we know it would be October 1997 until it finally got its long-deserved release!

Those initial teasers from DID were enough to get us on a daytrip to their HQ in Runcorn to find out more. I remember it well (Tony Ed. here by the way). There was barely an Amiga in sight, but a PC on every desk in the large DID office was running one version or another of TFX.

Loading instructions

Installing TFX from CD



Clicking on CUCD15, you'll find the TFX drawer. Inside you'll find three icons for TFX for different types of Amigas. The TFX_68000 version will work on any Amiga so if the other versions don't, then try this one.

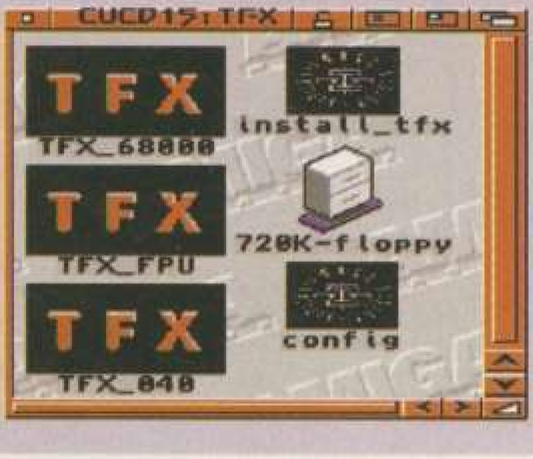
However, the other two versions will be faster if you have a math co-processor aka FPU aka 68882 or a 68040 based Amiga. If you have a math co-processor, the TFX_FPU version should be much quicker as will TFX 040 on 68040 based Amigas.

There's a config icon for setting up the control device and detail levels etc. Installing TFX is simplicity itself. You can either run the provided TFX installer icon or drag the entire directory over to your hard drive. If you're doing the latter, you'll need 17Mb of hard drive space but you can delete the 720K floppy directory which is 7Mb of this.

Installing from a PC

If you're using a PC to access our CD-ROM, we've provided a TFX archive already split into 720K chunks. OS 3.x Amigas come with CrossDOS as standard and you'll need to have this mounted to read PC formatted DD floppy disks. Usually obtained by dragging the PC0 icon from devs/storage/dosdrivers/ to devs/dos-drivers drawer or just clicking on it.

Copy everything from this drawer to floppy disks on the PC. Then copy all of the files to somewhere on your hard drive on the Amiga. At the end, rename the unpack.inf to unpack.info and you should be able to see an Unpack icon. Click on the icon and TFX will then be extracted to your hard drive. You can then delete the temporary files.



Installing from floppy disk

If you bought the floppy issue, you can obtain TFX on no less than seven floppy disks for the bargain price of £3.50 + 50p P&P, see page 7 for the full details.

When you've obtained the floppy disk page, disk 7 is the installer disk. Insert this disk and run the install icon. You'll be prompted as the installer joins up the data from all the floppy disks and then uncompresses it all.

You will need about 8Mb of hard drive space free and then you'll have a drawer much the same as the CD drawer with the three TFX launching icons as detailed in the CD section here. Enjoy!

Some were testing the flight model, others were compiling test versions of specific scenarios, while others were simply skiving off and playing the game!

Even though this was all PC based, DID assured us it would be transferred lock stock and barrel to the Amiga with no loss of quality, save for a slight dip in speed. At that time, the A1200 was Commodore's new baby, but true to their forward thinking attitude, DID were already confirming that TFX would be AGA only due to the high system requirements.

Back we came, laden down with screenshots, facts, photos of the team and a whole load of expectations. Then we waited. We waited a bit more. Then we gave up waiting as it seemed the Amiga version was never going to appear. When asked why it was taking so long, the response came that although the Amiga conversion was 95% complete, the then popular 2Mb A1200 just wasn't enough to do it justice. No Fast RAM and a 14MHz 68020 CPU just couldn't compare to the 60MHz+ PCs it was originally designed for, and that was that. Never mind, we had plenty more games to keep ourselves amused with back then. It wasn't until things started to dry up on the Amiga games scene that people remembered the next generation flight sim they'd been promised a few years ago and started demanding answers. Demand for a release of TFX mushroomed, but still nothing came from its proposed publishers Ocean, so we thought it was high time we stepped in to blow the dust of this never before seen masterpiece.

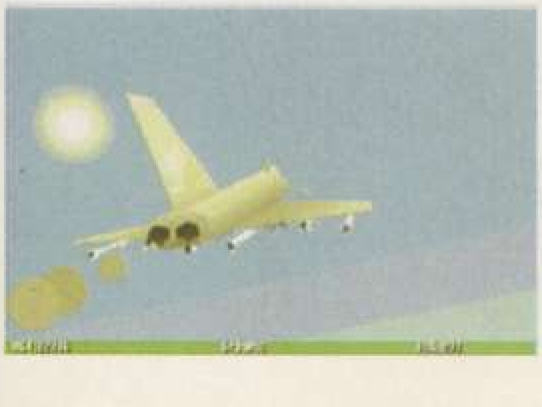
Whether you've been waiting for this game since the year dot or if you've never even heard of it before is totally irrelevant. At least it will be once you start playing.

TFX is a flight simulation for everyone. It's got all the realism you could ask for and action that'll make your palms sweat buckets. Above all it's got an atmosphere like no other game in the world. You might well think that because it was never released, the game probably has holes all over it, with unfinished business here and corners cut there. Not a bit of it.

This is a complete, fully fledged flight combat simulation with a full range of missions, five conflict theatres and various different options to take you from a rookie in training school to a seasoned and decorated top gun.

If you're the type of person who likes instant gratification and can't be bothered with all the bumph that surrounds most simulations, then you'll really love the Arcade mode. This drops you right into the thick of the action and tests your dogfighting skills to the maximum.

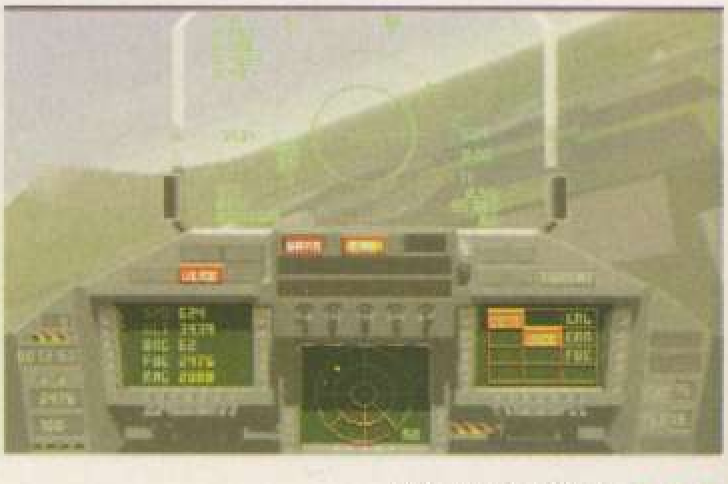
On the other hand, maybe you prefer to get nice and comfortable with a cup of tea, plan a route on your maps and then take to the skies for a good day's flying and a touch of sight seeing.



No problem: there's the Simulation mode for you, which gives you the option to select any of the five varied scenarios and puts you into a 'no comeback' mini mission which can be played either as a one off, or even completely ignored in favour of taking in the some of the scenery.

Perhaps you like to sign yourself over to the airborne armed forces and dedicate yourself to the pursuit of peace? OK, well how about the Tour of Duty, in which you'll be fully trained and then sent out on a long string of missions as a UN peace keeper, seeing the beauty of the world and then blowing it sky high. Whatever type of player that you are, TFX is definitely going to give you months, if not years of satisfying and engrossing gameplay.

So, all that's left to do now is get stuck into the action!

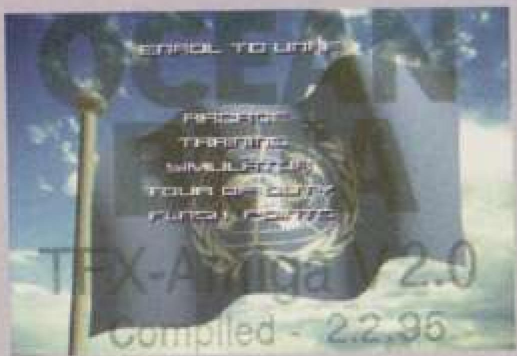


Continued overleaf ▶▶▶

Quickstart Guide

Getting started

Press the right mouse button to skip past the credits and on to the first options screen. This gives you the choice of creating a new pilot or continuing a previously saved game.



Create a new pilot

The first thing to do then, is enter your full name and your callsign – a nickname that's used for clearer communication. Next you need to select a game save slot for your new alter ego. Double click any of the blank ones. You can now take your pick from the list of five game types. Arcade mode drops you into a dogfight situation for some instant action. Training is the sensible option and the one that starts you off on your career as a top gun pilot. This breaks you into the game and acts as a kind of qualifying stage for the real deal missions.

The Simulator option is good for checking out the five different scenarios (Europe, Middle East, Atlantic, West Africa and Central America). This also gives you the option of selecting six different weather and time settings. The cloudy scenario has real cloud cover – try flying up through it to the blue sky above. The night time and storm settings are suprisingly realistic too. You'll find plenty of things to do here but won't have any hard and fast missions to carry out. Tour of Duty is reserved for those who have passed through the training ranks. Finally there's Flash Points, which also requires training to have been completed. Training might sound a bit boring but it's not, and it's worth earning your wings as soon as possible so as to get on with the Tour of Duty. You'll also find the training schedule is quite addictive, with a variety of mini missions to be taken care of, based in various scenarios.

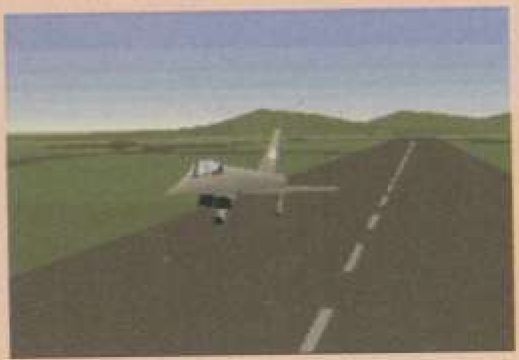
Load previous game

You can take a short cut into a full game by selecting Load Previous Game from the initial option screen. This allows you to select one of a few previously saved game positions from disk. Select one of the 'Dirk – Inferno – Loose Cannon' slots to be dropped straight into a 'hop'. You'll have the mission briefing displayed for a short time only, so make sure you jot down the basic gist of the mission and any co-ordinates that are mentioned. Watch out for further messages and updates appearing on the scrolling text display in the cockpit. These also appear on external views.

Taking off

Getting airbourne is pretty easy once you know what to do, but blowing up before you've left the runway can be a bit embarassing, not to mention annoying at first. Follow these steps:

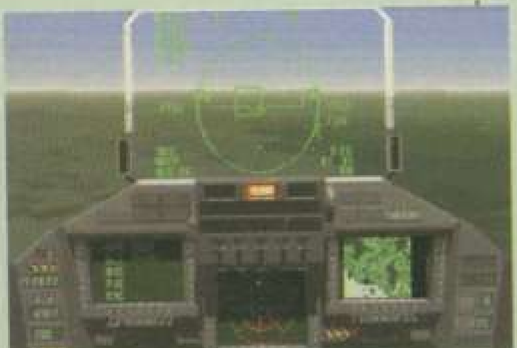
1. Turn on both engines ([and] keys).
2. Increase thrust using the + key.
3. Disengage wheel brakes (W).
4. Proceed along runway to gain speed.
5. Lift nose gently at speed 150.
6. Pull up the landing gear (G).



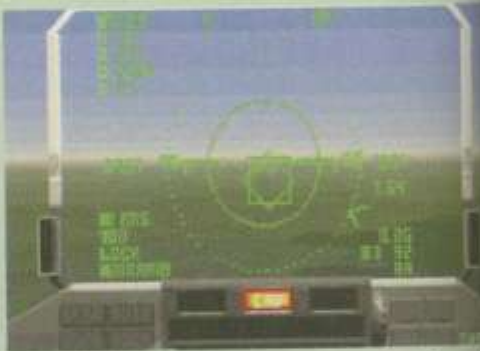
Picking off bogies

If there's one essential skill you need for TFX, this is it. Fortunately the first training session drops you into what is virtually a no-lose situation to get you into the swing of things. Your armoury of air-to-air missiles brings a clinical edge to the proceedings, although once you get into a real dogfight situation you'll find it's not quite as simple as it was in training.

Not all the weapons work exactly like this, but here's a basic guide to stitching up the enemy with a guided missile launched from the Eurofighter.



▲ Pick out a bogey and get on his tail with the help of your radar, lining up the red blip at the top.

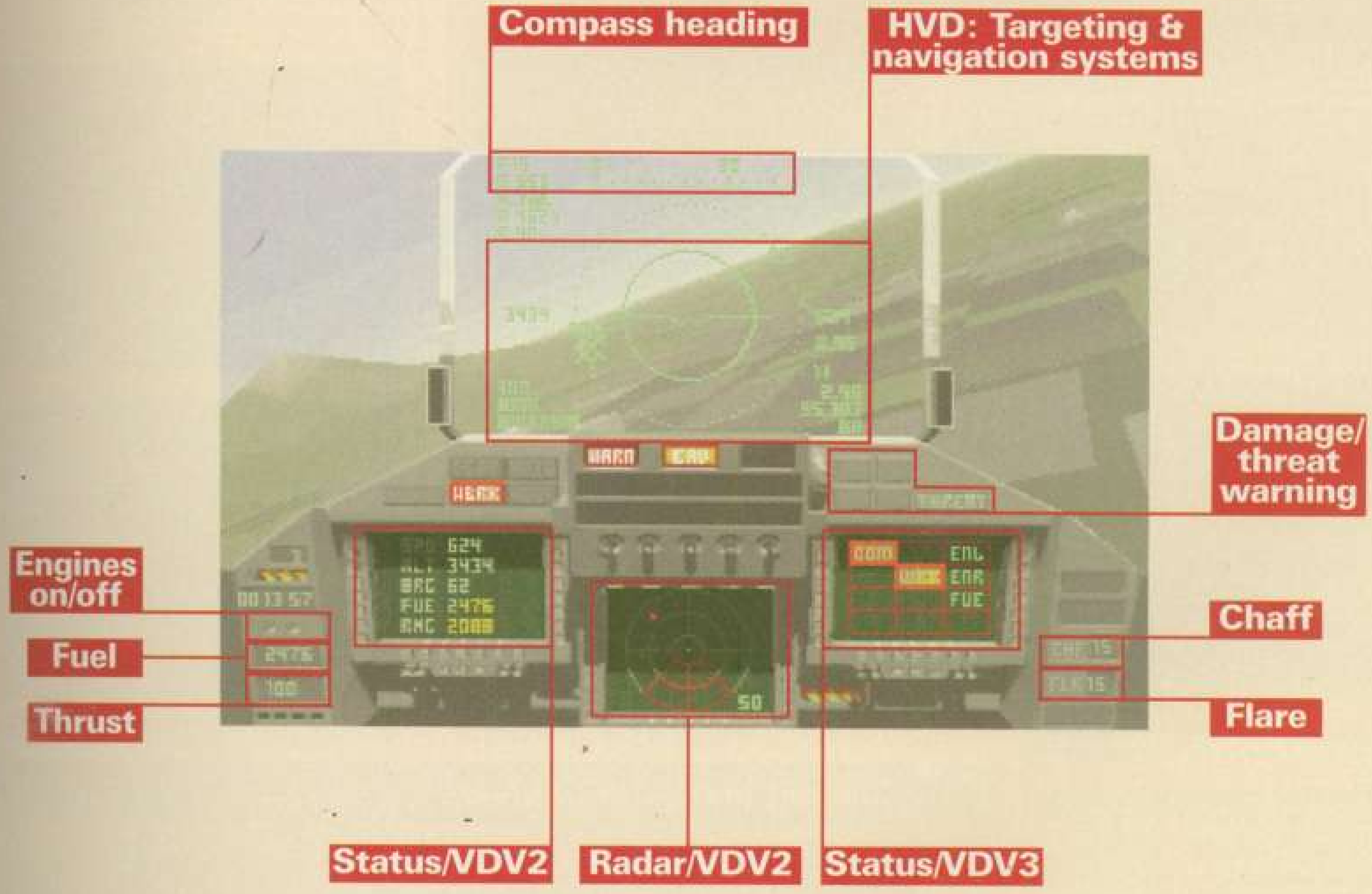


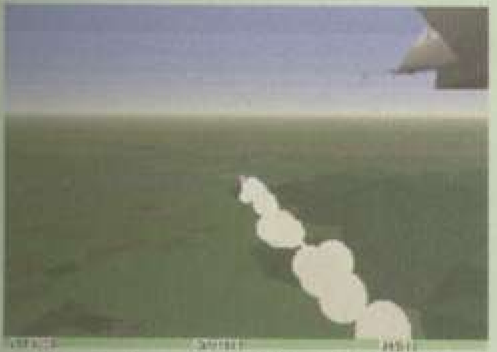
▲ Select an appropriate missile (Return) and keep it in your sights as the radar gets a lock.

TFX Keyboard controls

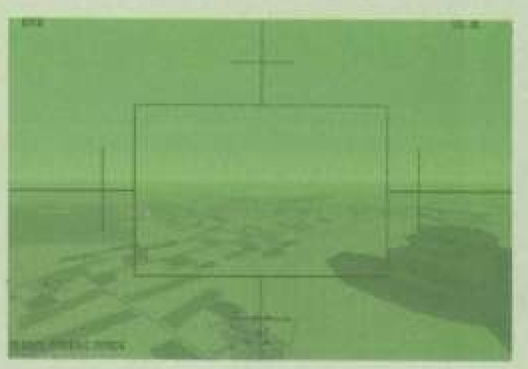
Escape	Eject/Quit
F keys	Views
F1	Cockpit
F2	Virtual cockpit left
F3	Virtual cockpit right
F4	Rear view
F5	Tracking camera 1
F6	Flyby tracking camera
F7	Tracking camera 2
F8	Missile view
F9	Enemy view
F10	Virtual cockpit centre
~	Settings
1	VDU 1 display
2	VDU 2 display
3	VDU 3 display
4	Save game position
5	Auto stick pressure
-	Decrease thrust
+	Increase thrust
B/Space	Ground target
Tab	Auto recovery
Shift +Q	Quit
W	Wheel brakes
R	Radar scaling
T	Time warp
I	Information
P	Pause
[	Engine 1 on/off
]	Engine 2 on/off
Return	Weapon select
A	Autopilot
S	Stealth
G	Landing gear
H	Hook
L	Landing system
B	Air brakes
M	Map
*	Max power
9	Cockpit up
3	Cockpit down
Help	PAL/NTSC

The TFX Cockpit


Compass heading
HVD: Targeting & navigation systems
Damage/ threat warning
Engines on/off
Fuel
Thrust
Chaff
Flare
Status/VDV2
Radar/VDV2
Status/VDV3



▲ Before the bogey shakes off the lock, let him have it with a sidewinder up the tradesman's entrance.



▲ Use the missile view to track its course as it swerves and bucks to home in on its target.

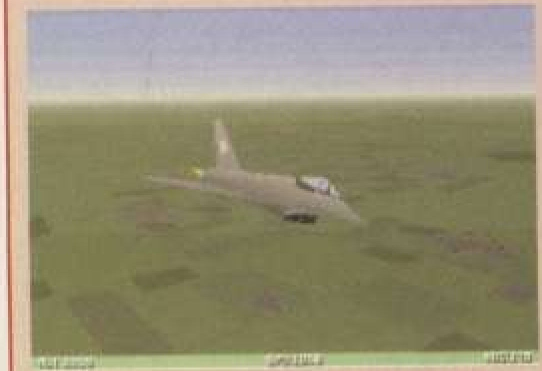
▲ Pat yourself on the back as the bogey takes a hit and drops into a flaming downward spiral of doom.

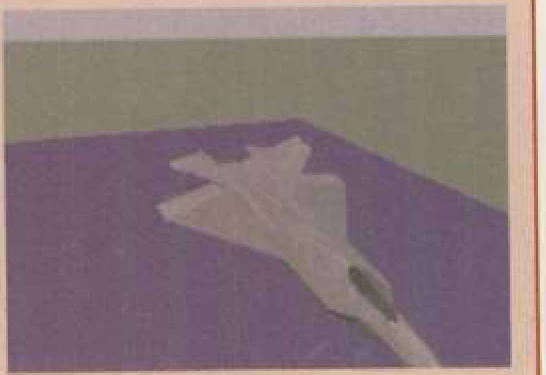
Continued overleaf ▶▶▶

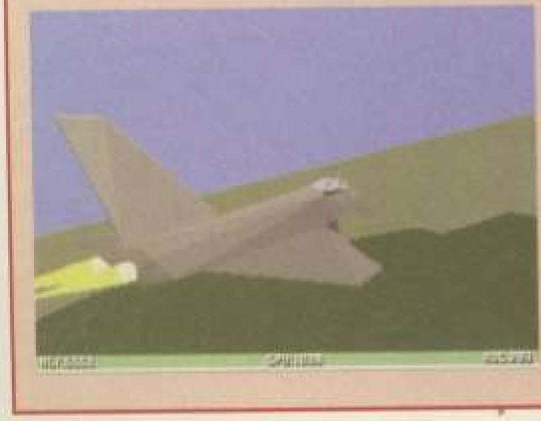
Configuration

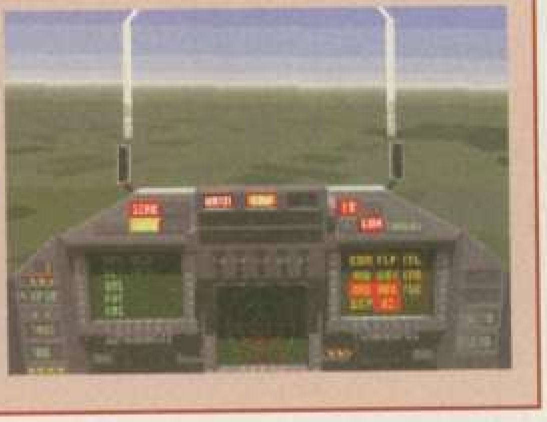
Detail settings

You can change the amount of detail in a number of ways in order to get the best trade-off between speed and visuals. Press the '–' key (above Tab) to access the configuration menu. From here you can make a few general set-up changes, such as joystick sensitivity, music, sound effects, world detail and the flight model. Click the Detail Menu button to change specific aspects of the display. This allows you to specify the graduation of the sky colouring, turn texture maps on or off, enable or discard gouraud shading and decide whether the weapons will be visible under the planes. You can also choose whether to have the different views snap from one to the next or to have the camera pan to the new view. Try cranking all the detail levels up to maximum at first, then if you would like some more speed, take out the aspects that you think are the least important.



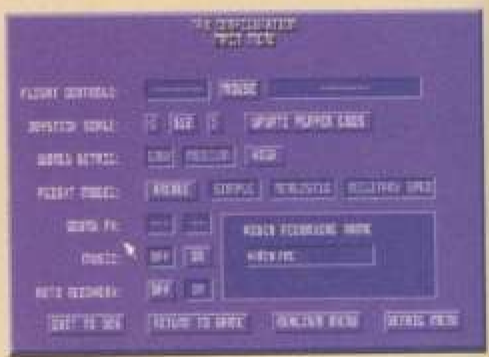


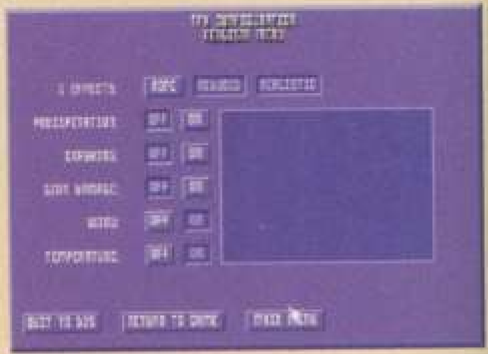




Realism settings

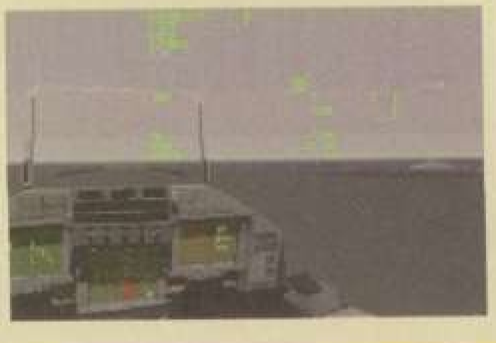
Not to be confused with the graphical detail settings, the realism settings control how harsh or forgiving the game is. These are reached via the same overall configuration menu that leads to the details controls. For example, you can set the game up so that it's impossible to crash. In the real world, flying at high speed with your landing gear down would damage them, if not rip them off altogether, but you can opt for unbreakable landing gear. There's variable wind, rain and temperature conditions too, which can be enabled or disabled. You could turn all of these off for a more arcade-style affair, or to make the game more playable for anyone less proficient at flight sims. Turning off crashing is a bit of a cop out but can be useful if you find yourself continually plummeting earthwards.





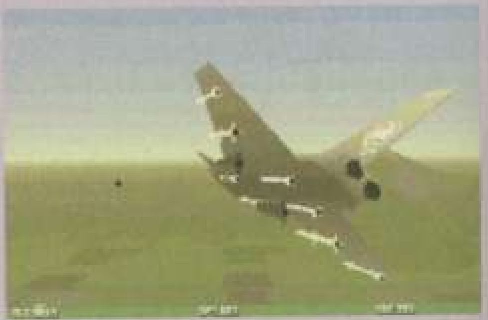
Virtual cockpit

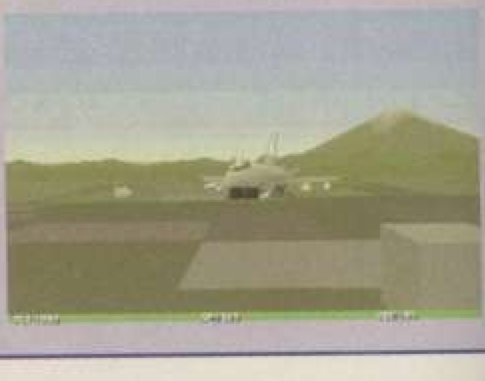
One of the many innovations in TFX is the virtual cockpit. This gives you a feeling of actually being there that's just not possible with the usual fixed position cockpit view. Accessed with the F2/F3 keys, it allows you to look around from left to right as you would be able to if you were sitting there yourself. Turn the texture maps off if it causes the game to run too slowly.



Cockpit and exterior views

No decent flight sim would be complete without a range of different view points, and TFX has a stack of them. Never before has an Amiga flight sim had such detailed and realistic planes, and consequently these are the best exterior views you're ever likely to see in an Amiga flight sim! You can switch from one to another using the function keys. As well as being good to look at and impressing your mates with (especially the F6 fly-by view which comes complete with 'swoosh!' sound effects), these are often very useful for getting a better idea of your surroundings. The rear view comes in especially handy for gloating at a ground installation you've just reduced to rubble as you power off up into the sky, or at least checking that you've hit the target on a close-range ground-based attack.





Continued overleaf ▶▶▶

Eyetech's Summer Sizzlers Accelerators from £69.95 - Forget '030/50's - get ~3 x the power with an 040/25MHz (19 MIPS) for just £159.95, 51 Mips '060/66MHz £399.95; A600 33MHz '030/MMU/FPU /standard simm to 32MB - £99.95; DIY-EZ-Tower from £99.95; 8-speed CDPlus £149.95; A1200 high speed serial port £49.95; 14.4K modems £24.95; SX32 from £159.95; RED=Price down , Blue=New product.

The All-New Eyetech EZ-TOWER

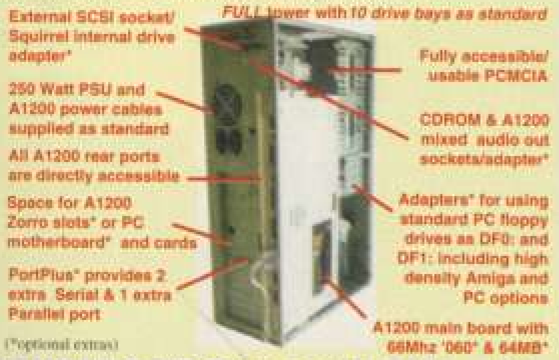
"This definitely one of the easiest solutions to building your own tower." John Kennedy, Amiga Format - July 1997

If you can use a screwdriver you could build your own A1200 tower system in less than half an hour!

It Couldn't be Easier!

- Remove the case top and keyboard ribbon cable *(No shield removal required).*
- Slot in the ribbon cable from the optional PC/ Amiga keyboard interface.
- Mount existing and new hard and floppy drives and CDROM units in the bays using the screws provided.
- Connect up the drives power and data cables.
- Clip the A1200 motherboard/base into the custom backpanel.
- Push on the power/HD/ FDD LED adapter and the A1200 power connector.
- Put back the outer case. Thats it! ...

Now You've Got Tower Power!


External SCSI socket/ Squirrel internal drive adapter*
FULL tower with 10 drive bays as standard
250 Watt PSU and A1200 power cables supplied as standard
Fully accessible/ usable PCMCIA
All A1200 rear ports are directly accessible
CDROM & A1200 mixed audio out sockets/adapter*
Space for A1200 Zorro slots* or PC motherboard* and cards
Adapters* for using standard PC floppy drives as DF0: and DF1: including high density Amiga and PC options
PortPlus* provides 2 extra Serial & 1 extra Parallel port
A1200 main board with 66Mhz '060* & 64MB*

(*optional extras)

The A1200 EZ-Tower

NEW! Mk2 EZ-Tower with PSU - *still only £119.95*

DIY option - all parts/instrs provided - *£99.95*

***EZ-Key* A1200 adapter** for PC & Amiga kbds- just push in the ribbon cable!	£39.95
7 x Zorro II slots expansion board - including 5 x PC ISA slots for GG2 bridgeboard, ethernet etc *With accelerator pass-through.* Fits most towers.	£179.95
Single Zorro II slot adapter for graphics card - *with accel pass-through.*	£99.95
- as above with built-in *EZ-Key* i/f (Both available August 1997)	£134.95
***EZ-DF0* A1200 tower DF0: diskette drive** with faceplate, cable and interface	£44.95
Squirrel adapter for EZ-Tower - with int HD/CDROM & ext Centr's 50w skts	£19.95

Collection, fitting and delivery service - Please ring

...Or buy a CDPlus unit (below) and get an EZ-Tower for just £99.95*

(*as an alternative to the regular CDPlus case)

SX32Mk2 & SX32Pro *Internal* Expansion for the CD32

STOP PRESS!!!

The Award Winning SX32 Pro is now even more affordable

The SX32Pro and SX32Mk2 add ...

- 33 or 50MHz '030 MMU CPU and FPU socket (33Mhz FPU socket only on the SX32Mk2)
- Simm socket for up to 64MB of 32 bit fast (60/70ns) RAM (up to 8MB fast (70ns) RAM on the SX32Mk2)
- Buffered IDE interface for internal 2.5" hard drive ***and*** second hard drive, SyQuest, Jaz or *even 8 speed CDROM* (optional extra on the SX32 Mk2)
- Sockets for RGB video (23 pin), VGA video (15 pin), Parallel port (25 pin), Serial port (25 pin), Floppy disk port (23 pin)
- Jumper-selectable for PC or Amiga keyboard input (external adapter on SX32Mk2)

... to the CD32's existing mouse, joystick, keyboard, audio, RF, composite video and SVHS ports.

What do the reviewers say?

Amiga User Int'l	*"95% - Definitely Recommended"*
Amiga Computing	*"90% - A Dream to Use." Blue Chip Award*
Amiga Format	*"96% - Absolutely Top Notch" Gold Award*

The SX32Pro

SX32Mk2 - *sale price* - £149.95

SX32Pro-50 - *sale price* - £299.95

Genuine Amiga 89-key compact keyboard	*£34.95*
SX32 floppy, hard drives 20MB-1.8GB, RAM	*- Please ring*

All models include full pictorial fitting instructions,WB3.0 & utilities on CD and 'Click-and-Go' hard drive installation diskette

Special CPU purchase Last few - SX32Pro-40SE. A Special Edition SX32 Pro with 40Mhz '030EC processor (no MMU) - *Just* £249.95

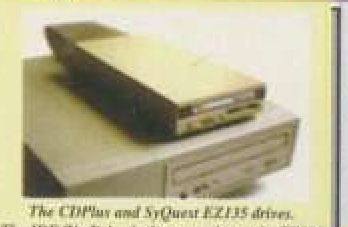
AMIGA HEALTH WARNING

If you have recently fitted - or intend to fit - an IDE/ATAPI CDROM to your A1200 *(other than an Eyetech CDPlus unit)* **without** a buffered interface then your Amiga is in risk of serious damage arising in the future. The A1200 - unlike A4000's and PC's - has ***NO*** internal IDE buffering. On the A1200 the IDE interface connects ***directly*** to the A1200 processor & custom chips *AT ALL TIMES* which have insufficient output to drive more than one IDE/ATAPI device (and only then on a short data cable) for any sustained time period. We are now making the Eyetech *Mk2* 4-device buffered interface available separately for use with other kits and D-I-Y CDROM installations. At only £39.95 it is a small price to pay to preserve your Amiga's health.

"A buffered IDE interface is essential to avoid overloading of the A1200's IDE port when adding extra devices" - John Kennedy - Amiga Format - July 1997

The Top-Rated Eyetech *CDPlus* for the A1200

- 8- or 12/16- speed external CDROM unit in quality, CE-approved case with heavy duty PSU
- Leaves trapdoor free for accelerators / memory expansion and the PCMCIA slot free for digitisers, modems, samplers etc
- Option to add additional HD's, CDRoms, SyQuests, *IDE Zips*, Jazs, SyJets, ATAPI tape streamers etc powered from the CDPlus unit
- Comes with special Eyetech *'060-compatible* Mk2 4-device EIDE buffered interface board - easily fitted in minutes with no cutting/drilling (Note that IDE CDROMS *must never* be directly connected to the A1200 without a buffered interface - ask any qualified electronics engineer!)
- Gold plated audio phono sockets at rear (CD+ only) and front panel headphone socket and volume control



The CDPlus and SyQuest EZ135 drives. The IDE Zip Drive is the same size as the EZ135

Amazing Value

8-speed - *only* £149.95

***NEW!* 12/16-Speed - 2.4MB/s (max) -*only* £179.95**

Considering a PowerStation?

The CDPlus is now available with a, 230W, CE-approved, PC MiniTower* or Desktop* case (which can also power your A1200) - *for only £20 extra*

(*as an alternative to the regular CDPlus case)

What do the reviewers say?

Amiga User International - *97%*

"... It all worked faultlessly ... "

Amiga Format - *96%*

"... An absolutely superb bit of kit.."

Amiga Shopper - *90%*

"... This is a quality product..."

The Amazing Iomega *IDE* Zip Drive

Another first from Eyetech

- *Can be used in place of - or as well as*- the internal hard drive*
- *Use a different bootable cartridge for each application or family member*
- *Ideal for transferring multimedia data between Amigas and/or other platforms*
- ***Fits in any Amiga/desktop/minitower floppy drive bay or in external case***

CARTRIDGE CHANGES AUTOMATICALLY RECOGNISED!

The IDE Zip drive fitted in an A1200

Bare IDE Zip drive *(inc Eyetech V2.0 Ziptools)* **- Just £119.95**

100MB Zip cartridges just £14.95/1 or £39.95/3 (*A600/1200 buffered interface needed)

A1200 *InstantDrives* & *TowerDrives*

***InstantDrives* and *TowerDrives* are only available from Eyetech**

"The fastest drive I have tested on any platform ...95%" **- David Taylor - Amiga Format February 1997**

Important Notes!

Thinking of buying a **BIG** drive? Dont waste your money on ***ANY DRIVE OVER 4.1GB*** as the Amiga O/S doesn't support it! (2^32-1 bytes actually). Be warned!

3.5" hard drives - even those described as *'Slim'* - are usually 1"/25mm high and ***will not*** fit in an A1200 without significant modifications to the case and metal shielding - which itself reduces the value of your computer.

- InstantDrives require no hole drilling, case clipping, or shield removal required and come inclusive of full fitting kit and easy-to-follow pictorial instructions
- All drives come ready-to-use with WB3.0 preinstalled & WB2.x install script.
- All drives over 350MB also come with over 45 top quality utilities (not shovelware) ***and*** MMe multimedia authoring software preinstalled, configured and ready-to-run.

InstantDrives:		**2.56GB AV(~3MB/s)**	**£229.95**
TowerDrives:		**1.7GB**	**£159.95**
2.11GB	**£179.95**	**3.2GB**	**£199.95**
4GB - Take your Amiga *to the limit!* - for just			**£259.95**

2.5" InstantDrives for the A600, A1200, SX32 & SX32 Pro

344MB	A 2.5" drive ideal for the SX32Mk2 and for the A1200/A600	£109.95
540MB	A fast, superslim drive with ample capacity for most users	£139.95
810MB	A superb, superslim drive ideal for users of serious applications	£169.95
1.08GB	The high performance superslim drive is ideal for power users	£189.95
1.8GB	This top-of-the-range superslim drive is perfect for the SX32Pro	£209.95

D-I-Y and Bargain Corner

Hard-to-find parts for your Amiga project

Hard , floppy drive cables and cases	
2.5"-2.5" 44-way 2.5" HD cables 9cm **£8.95**, 13cm **£9.95**, 60cm	£19.95
2.5" 3x44-way hard drive cables for 2 x 2.5" drives (6cm+6cm)	£14.95
3.5" power & data cables for A600 & A1200	£14.95
3.5" full fitting kit for A600 & A1200 (contains ***everything***)	£24.95
3.5" external hard drive case **£19.95**, 3.5" removeable drive case	£24.95
Metal CDROM case (no psu)	£4.95
3 x 40-way IDE cable for 3.5" HD/CDROM ~85cm/2' 9"	£9.95
Custom 3 x 40 IDE cables to 1.5m/5' (enclose drawing)	£19.95
3.5" hard drive to 5.25" bay mounting adapters	£5.95
2.5" hard drive to 3.5" bay with 3.5" data/power cable adapters	£12.95
3.5" floppy/SyQuest/Zip drive to 5.25" bay mounting adapters	£6.95
40 pin m-f detachable data cable forexternal 3.5" HD/CDROM's	£12.95
Slimline external floppy/IDE SyQuest/IDE ZIP/IDE Jaz case	£9.95
SCSI cable 25way 'D'(m)to 50way 'Centronics' (m) (1m)	£9.95
2 x 34pin-F, 0.6m ribbon cables for mounting DF0: in tower	£9.95
23p-M to 23p-F external floppy ext'n cable **0.6m £12.95; 2m**	£14.95
Audio & video cables and adapters	
3.5mm stereo jack plug to 2 x phono plugs for CDROM	£5.95
CDROM standard 4 pin inverted T audio connector & phono plugs	£9.95
Phono plug x 2 to phono plug/socket x 2 audio mixer leads	£6.95
Stereo 2 x phono plug to 2 x phono plug 1.1m/4' (4.8m/16' **£9.95**)	£4.95
Stereo speakers (pair), with amp (10wPMPO) & mainspsu	£9.95
Power supplies , cables and PC towers//desktops with integral psus	
IDE or SCSI CDROM case, 40w PSU, audio & data connect's	£59.95
Enhanced metal cased PSU for A600/A1200/CD32/CDROM/ external HD (fit your old lead - instructions provided)	£34.95
Mini-tower or desktop case with 200W/230W PSU, CD & HD/Zip bay, power lead connector block, resistor, cable restraint etc. & full instr'ns	£39.95
Genuine CD32 replacement PSU	£14.95
4 pin M-F extension cable from PSU to external HD/CD 0.9m/3'	£9.95
23 pin m floppy drive connector to 4 pin HD/CDROM power plug	£9.95
Miscellaneous	
A1200 /SX32 internal cooling fan - dissipate that extra power!	£14.95
VGA 23-15 pin adapter for A500/600/1200 **£12.95**; but for A4K	£19.95
A2000 keyboards (new) for A2000/3000/4000* (*adapter +£5)	£49.95
50MHz capable PGA FPU for SX32Pro-50 or accelerators	£39.95
Amiga CDROM disks - our selection - 5 for	£10.00
A1200 RAM boards (clock, FPU skt)	£29.95
Amiga microswitched mouse with mousemat	£9.95
28.8/14.4 compact data/fax modems £49.95, 14.4/14.4 from	£24.95
A1200 Workbench 3.0 disks (5) with WB3.0 & user manuals	£19.95

Two new A1200 Expansion Products from Eyetech

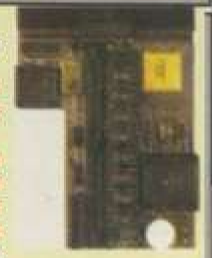
***PortPlus* - high speed serial and parallel port expansion**

- *2 x **460Kbaud** buffered serial ports with low CPU overhead*
- *PC & Amiga compatible parallel port transferring up to **500K bytes/sec***
- *Optional high speed PC-Amiga & Amiga-Amiga **networking software***
- ***Leaves PCMCIA & trapdoor free** ; accelerator friendly & very easy to fit*

PortPlus - just £89.95! (WITH parallel port driver!)

New! *PortJnr*- 1 high speed serial port - *just £49.95*

Apollo Accelerators - Unbeatable pricing



A600* - 33MHz '030 with MMU & FPU exp to 32MB *£99.95

Entry level A1200 Accelerators - Unbelievable value

25MHz '030 with MMU & FPU. (5 Mips)	*- Just* **£69.95**
33MHz '030 with MMU & FPU. (7 Mips)	*- Just* **£84.95**

Power User A1200 '040/'060 accelerators (no tower req'd)

25MHz '040 with MMU & FPU. (19 Mips)	*- Only* **£159.95**
33MHz '040 with MMU & FPU. (25 Mips)	*- Only* **£179.95**
40MHz '040 with MMU & FPU. (30 Mips)	*- Only* **£199.95**
50MHz '060 with MMU & FPU. (39 Mips)	*- Only* **£349.95**
66MHz '060 with MMU & FPU. (51 Mips)	*- Only* **£399.95**

A Standard A1200 is rated at 1.3 Mips. All measurements from Sysinfo

Memory : 4MB - £18.95; 8MB - £34.95; 16MB - £59.95; 32MB - £129.95

Interface Island

Where your Amiga does more

A1200/A4000 non-Zorro	
4-device A1200 buffered EIDE i/f	£39.95
4-device EIDE interface for A4000	£29.95
***EZ-Key* A1200-PC/A2000 k/b adapt'r**	£39.95
***EZ-DF0* interface for Sony floppy**	£14.95
***EZ-DF0* i/f, with Sony floppy & cable**	£39.95
***DiskPlus* DD/HD Amiga & PC 2x FDD i/f**	
- for A1200 hard drive IDE port	£64.95
- for A1200 clock port	£69.95
- for A4000 IDE port	£69.95
PortPlus 2x 460Kbaud ser + 1 x par	£89.95
PortJnr 1x 460Kbaud serial port	£49.95
Audio mixer skts/leads for EZ-Tower	£19.95
Zorro II/III	
GG2+ - use PC cards in Z2 slots	£129.95
IDEPlus 3x2 IDE + 2x DD/HD PC & Amiga floppies. Expandable to10 x IDE dr ives	£79.95

Amiga Drivers for Epson Printers and Scanners

Scanned printed output

EnPrint for the Stylus Range of printers

- Unbelievable photographic quality output
- 'Preferences' & stand-alone printing program

ScanQuix3 for all Epson scanners

- 24 bit scanning with full range of editing options
- 'Scan-to-disk' option in Jpeg or IFF formats
- Stand-alone use or integrates with your Art package (Photogenics, ImageFX, AdPro, XiPaint, Pagestream 3, DPaint5, ArtEffect, PPaint)
- ***Also available for HP, Mustek & Artec units***

EnPrint v2.1.3	**- only £24.95**
ScanQuix v3.0	**- only £59.95**

Eyetech Group Ltd
The Old Bank, 12 West Green,
Stokesley, N Yorks, TS9 5BB, UK

Tel UK: 07000 4 AMIGA
01642 713 185
Tel Int'l: +44 1642 713 185
Fax: +44 1642 713 634
eyetech@cix.co.uk
www.eyetech.co.uk/~eyetech

Voted AUI Amiga Company of the Year 1996/7

EYETECH

Next Day delivery to EC and USA/Canada. Worldwide deliveries in 2-7 days from receipt of faxed order and payment details. (eg SX32 next day to NYC £25.30)

UK m'land next day insured del'y charges: S/w, cables, buffered i/f £3; 2.5" drives, accel's, mem boards £6; manuals £7; 3.5" drives, modems, psu's £9.50; Twrs, CD+ (2day)£10

Ring/fax/email for other delivery costs

UK bank/building society cheques, Visa*, Mastercard*, Switch, Delta, Connect, Postal/ Money orders accepted. * A 3% surcharge is applicable to all credit card orders. Due to space limitations some of the specs given are indicative only - please ring/write for further details. Please check prices, specs and availability before ordering. If ordering by post please include a contact phone no. Goods are not supplied on a trial basis. E&OE. All prices include VAT at 17.5%. VAT is not applicable to non-EC orders.

Know your hardware

Navigation and tracking

All the planes come complete with advanced tracking devices and maps of the areas in which your missions take place. It's essiential that you know how to read and use these devices if you're to be able to find your prey, avoid being hit and find your way back home after a successful mission.

You can view the maps opposite at any time by pressing M. The maps you'll see in the game also show blips to indicate friendly and enemy activity. The green and blue blips are friendly, while the enemies show up as red. Flashing red dots indicate primary targets. You'll often be given a grid reference during the mission briefing to tell you where your target lies. Check the grids overlaid on the maps opposite for a quick idea of where you should be headed.

Weapons

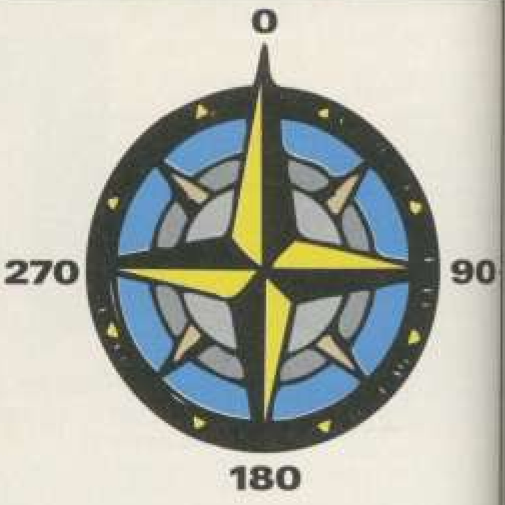
Your weapons fall into two basic categories: air-to-air and air-to-ground. Use the Return key to cycle through your air-to-air missiles and use the Backspace key to activate air-to-ground weapons. You also have a cannon for when all else fails. This can be used to shoot down planes and also to destroy ground based targets, but ammunition is limited and so is its range.

If you have a target in view, the currently selected weapon will attempt to lock on to it. You'll know if you've got a lock with an air-to-air missle as the floating diamond on the HUD will meet up with the square around the target. You should also hear your on-board computer announce that it's 'Tracking...' the enemy. The air-to-ground weapons work in a similar way. If you can't get a lock on your ground target for any reason, a bit of sharp shooting with the cannons will normally do the trick.

Once you've got your lock you can hit the Spacebar to the sound of 'Missile away!' from your friendly in-flight computer. If you don't need to take any immediate evasive action you could switch to the enemy view or even better, the missile view to watch it home in.

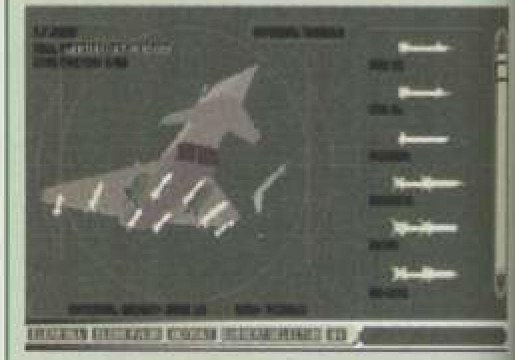
Getting a lock doesn't necessarily mean you'll get a direct hit. A good bit of flying from the enemy can shake off a missile, although the missiles themselves don't give up without a fight!

Compass bearings



Your Head Up Display (HUD) includes a compass to show which way you are facing. 0 degrees is North, 90 degrees is East, 180 degrees is South and 270 degrees is West.

Arming your plane

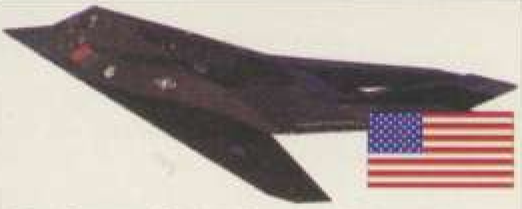


You can scroll through the arms on the right, then drag and drop them on the plane to load up manually. Alternatively use the Default arming button.

Lockheed F-22

An incredibly versatile plane, the Lockheed F-22 was designed to scramble from both land and sea via aircraft carriers as and when required. Its strike potential is equally varied with the ability to take out air and land based targets with a range of modern 'fire and forget' missiles and bombs. While not the most attractive of the three on offer, it's the only one capable of sea-based missions.

F-117A Stealth Fighter



The famous F-117A Stealth Fighter also comes from the Lockheed camp, and marked a significant step forward in stealth technology. It has since spawned the stealth bomber, which was used most publicly in the Gulf war, with the precision of its air-to-ground strikes making headline news. Although harder to detect than other planes, the F-117A is by no means totally 'invisible'.

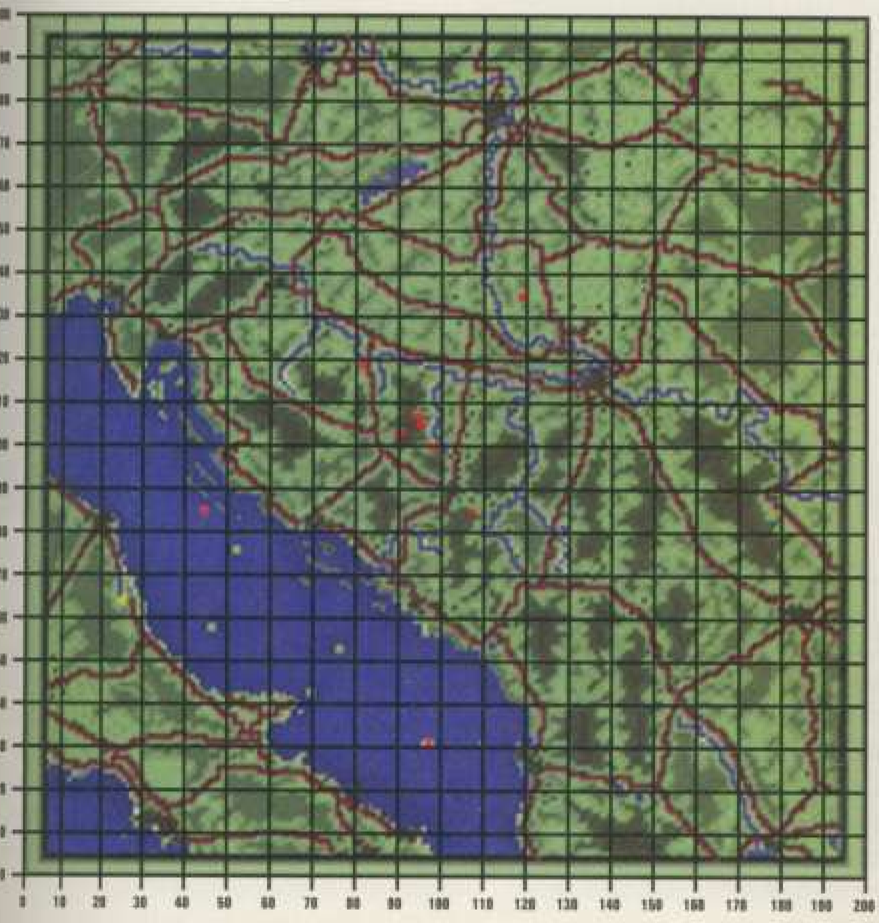
Eurofighter

Based on the French Mirage jet, the Eurofighter 2000 was commissioned as a cost effective state of the art jet fighter for European security. Like the Lockheed it too is very versatile in its ability to carry out a wide variety of strikes effectively. It also offers Stealth properties, with short take off and landing abilities, high agility and extremely configurable payload options.

e Maps

To help you get about in your missions we've included maps of all the areas, complete with grid references that don't appear in the game.

Europe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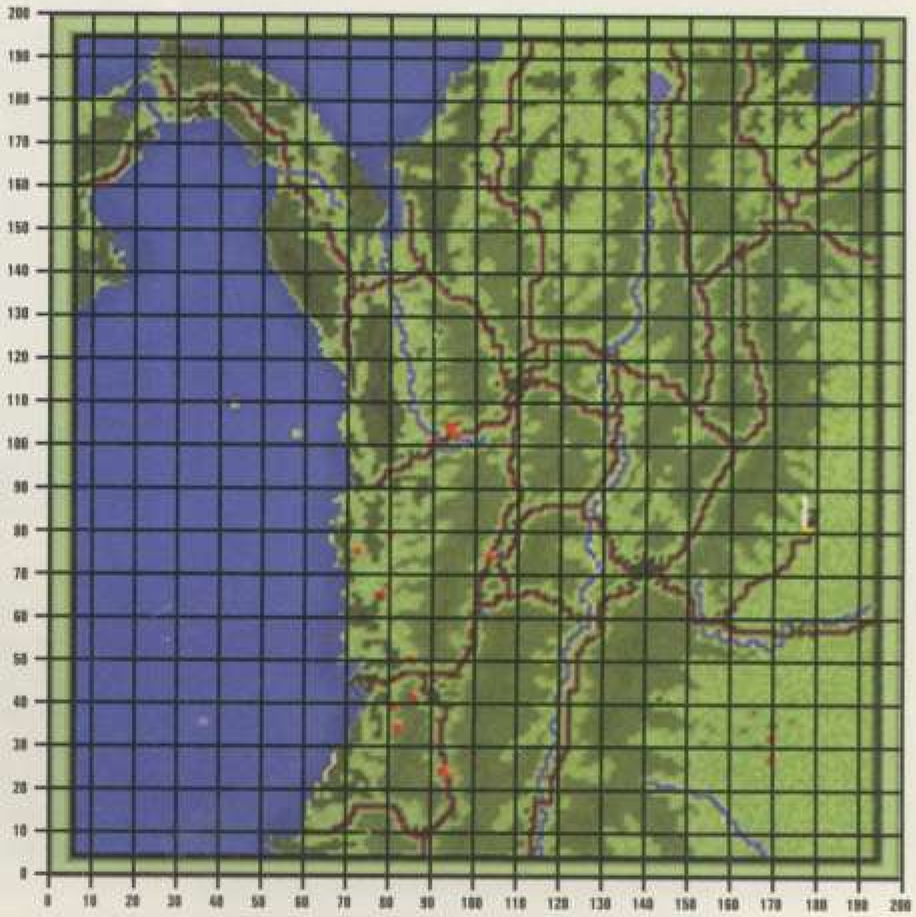
Central America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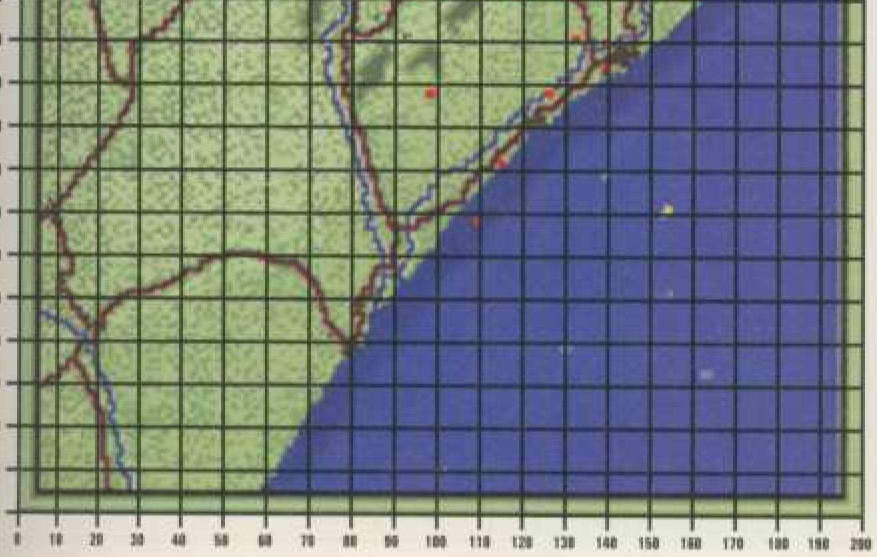
West Africa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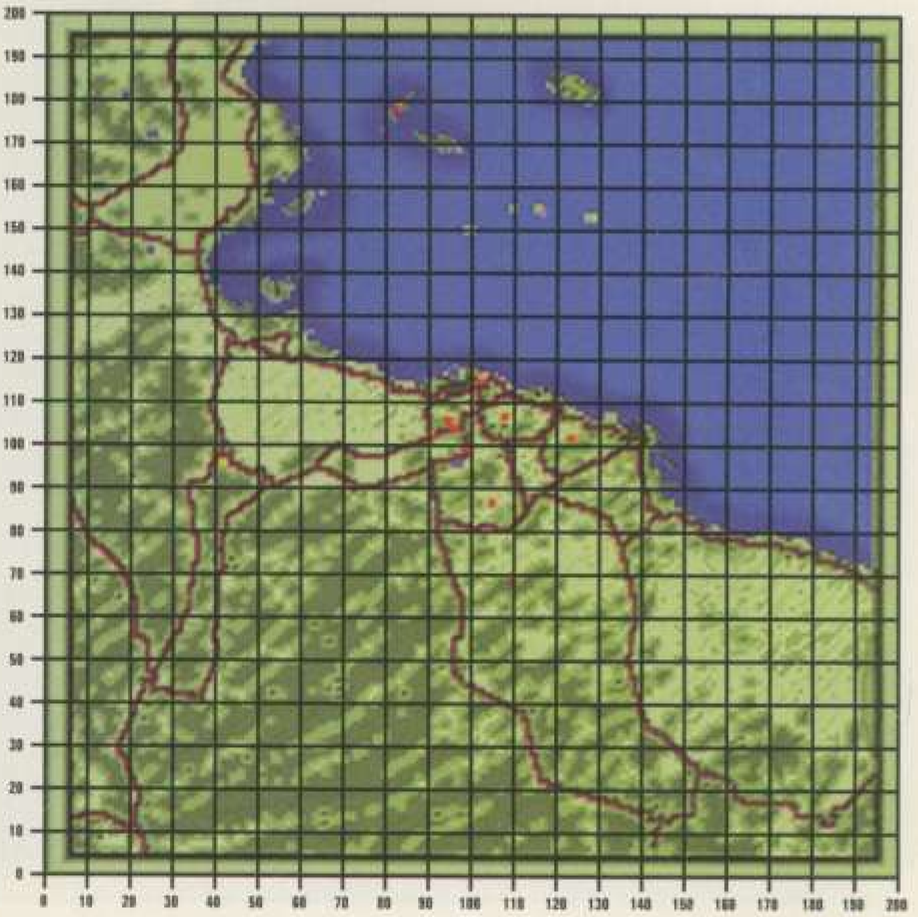
North Africa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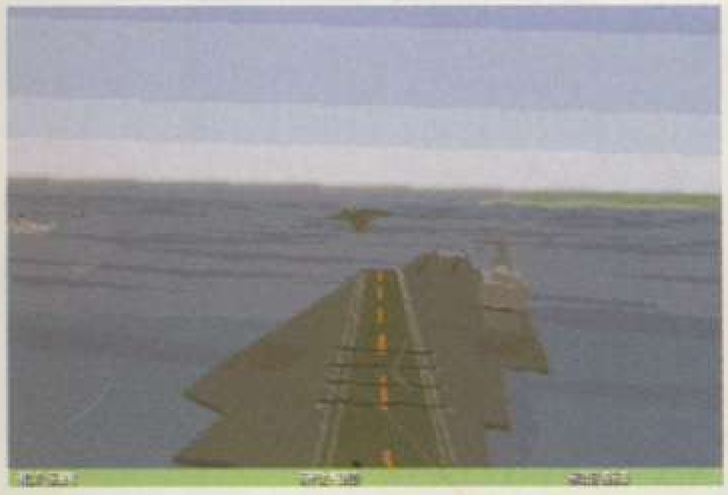
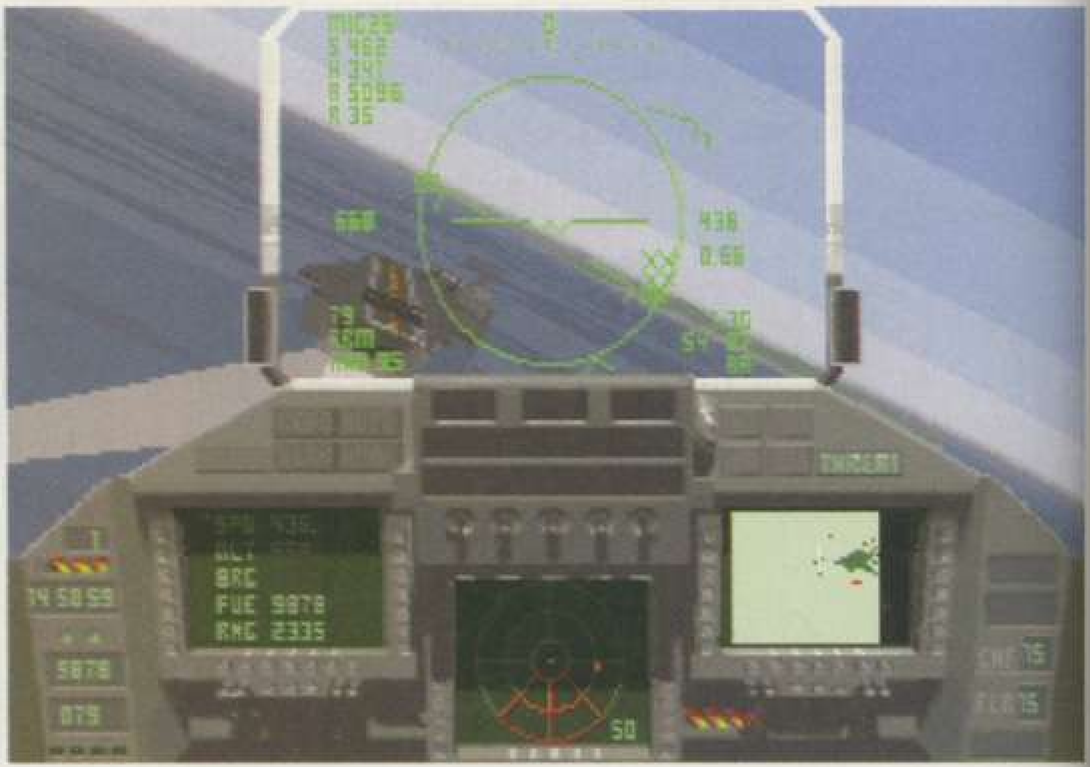
Technique and Tips





Landing

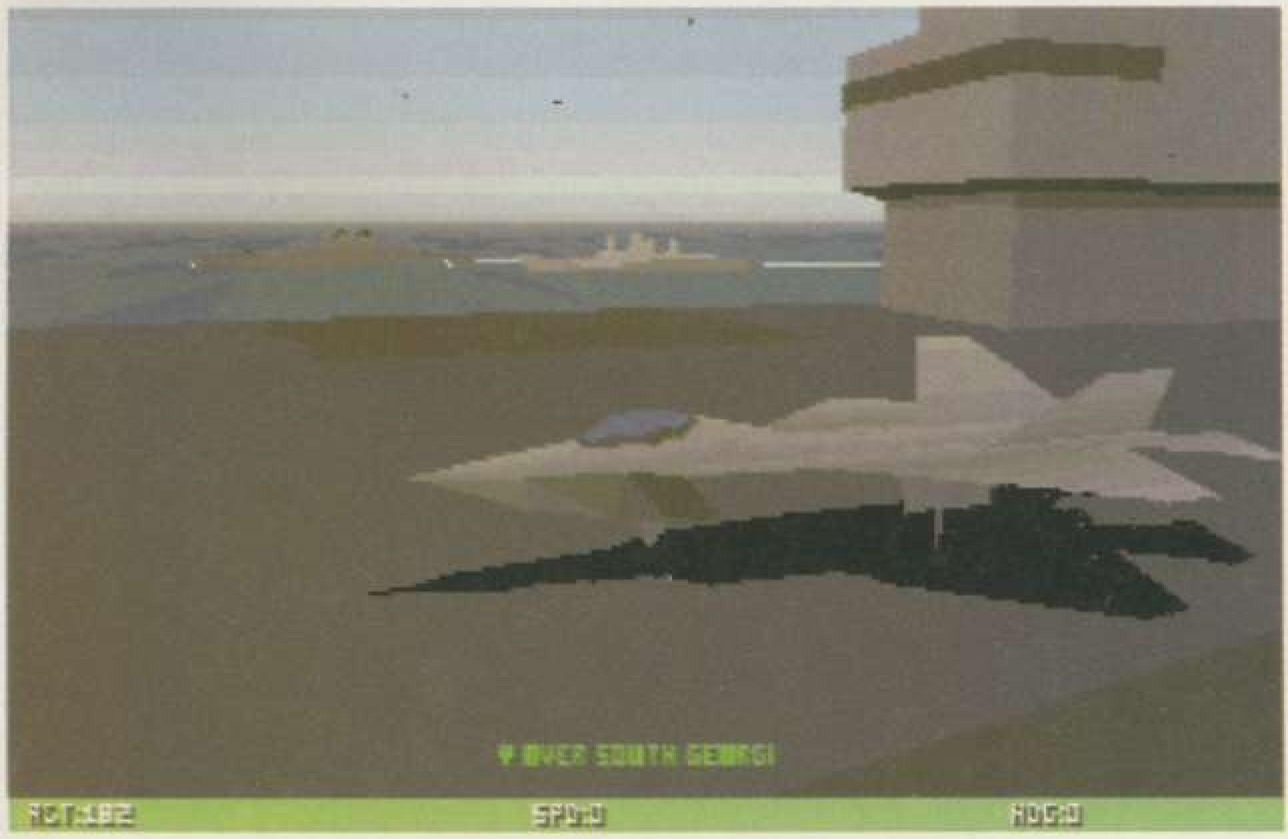
The initial training missions don't require you to actually land your kite after you've hit your targets, but once you get further down the line, and also in the Tour of Duty, you'll need to return to your airbase or your aircraft carrier to complete the mission. Landing is a tricky business. You can't just go hurtling towards the strip and hope that slamming the anchors on at the last minute is going to be enough. So let's take a look at landing on an airstrip.

The first thing to do is get lined up with the strip. One of the best ways to do this is to take a flight over the airfield in order to get a good look at the runway. Once you know the lie of the land, get some distance between yourself and the runway (using the Timewarp function if you're impatient) and then turn back and level up with the runway. Take your altitude down to around 500 feet and hold it steady. As you get closer, put the airbrakes on and reduce the thrust to about 60%. If you don't use the airbrakes you run the risk of stalling the plane. Next put the nose down slightly and start the final descent. Remember to put the landing gear down at this stage. Aim to make contact with the runway at as shallow an angle as possible, and once you've touched down, put the wheel brakes on and cut the thrust totally. The plane should come to a halt, safe and sound on terra firma.

Carrier landings

Now this is a bit more difficult. Just about all of the land-based procedure applies here but now you have a much shorter landing area, and you also have to contend with it being stuck in the middle of the sea. Judging the correct descent altitude is the hardest thing here. As before, buzzing the aircraft carrier is helpful, if for no other reason than to make sure you're not attempting to land on one of the fleet's battleships!

Since the danger of overshooting is obviously very high when you're landing on such a small area, you need to employ your 'hook' to bring the plane to a stop before it falls off the end of the ship. Remember to put your hook down when you lower the landing gear. Also beware of coming in too low and crashing into the end of the boat.



Dogfighting techniques

It costs American taxpayers millions to send a pilot to the Top Gun Academy to learn to be a combat pilot. Here's the patented CU Amiga 50p version.

The Immelman:

A complex barrel roll/loop which allows you to get the jump on your foe. CU Amiga advocates not bothering.

Coming Out Of the Sun:

Another top gun fave. Requires lots of sun tan lotion and good air conditioning. Too much effort.

Getting stuck in:

Now this is the tactic for us! See the enemy, charge in headfirst cannons blazing, launch missiles like there is no tomorrow and blow them out of the sky! Remember – it's only a game.

The Best bits

In case you hadn't realised yet, TFX really is amazing! Here's a quick tour of some of the best and most unique bits of the game...

Mountains

Sure, we've all seen little pyramid hills before in the likes of Gunship, but you've never seen anything like these before: snow-capped peaks and extensive ranges of mountains and foothills give the landscapes more realism than ever before. They're not just there for show either. Make sure if you set your sights on a waypoint and go off to make a cuppa that you're not headed for a collision with one of them!

Texture maps

Now common on other platforms, texture mapping is still rarely seen on the Amiga outside of 3D rendering packages and PD demos. TFX uses them mainly for its virtual cockpit, in which you can see limbs and the cockpit move around your field of vision as you bank and climb through the skies. There's also a natty little UN logo on the tail fin of the Eurofighter 2000.

Gouraud shading

When combined with the models of the planes, the ground installments and the mountains, the shading gives everything a convincing solidity that's missing in most paper dart flight sims. It's this which caps the mountain ranges with snow, creates realistic washes behind the battleships and even brings the explosions to life.

Clouds

You thought you'd seen clouds before didn't you? Well we're not talking about two dimensional polygons that sit up at 5,000 feet like some kind of magic carpet. No, these are proper, real clouds made up of lots of little clouds. Go into a climb on a cloudy day and watch as your view fades to grey. Keep going a little further and you'll emerge into the clear blue sky above.

Night flights

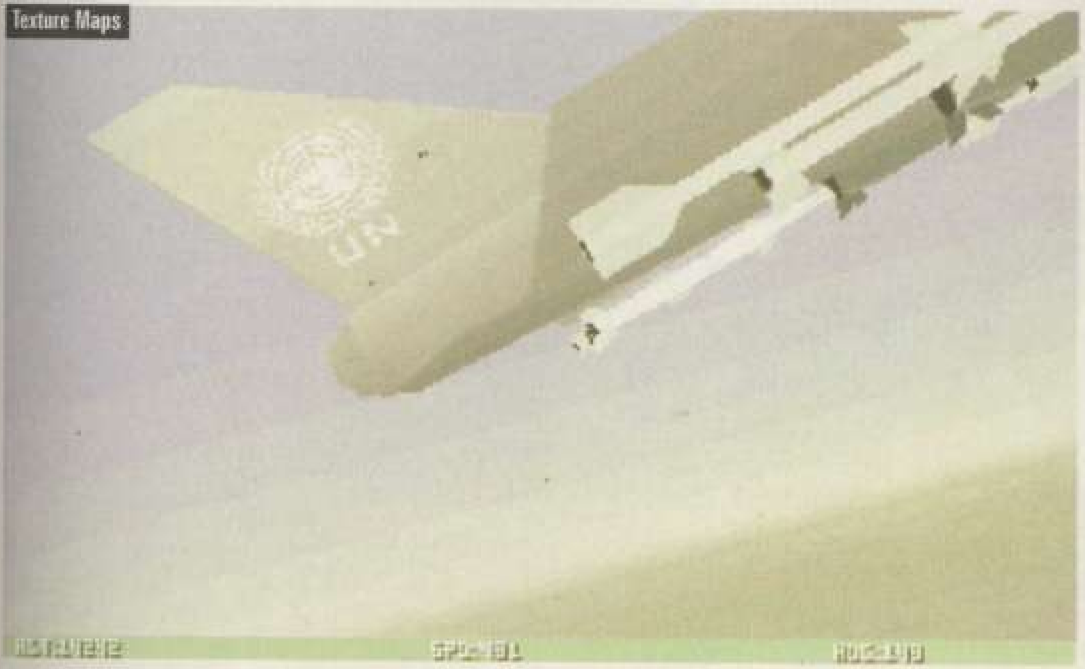
You might think that being assigned a night mission would be a bit tedious. Nothing to see except the inky blackness, right? Well, that would be true in most flight sims, in which the scenarios consist of a plain, two roads and a shed, but TFX goes out of its way to bring you full illuminated cities. You could almost believe that you were flying over Las Vegas, except Las Vegas isn't one of the scenarios.

Massive worlds

And another thing: there's over three million square miles of terrain and airspace to cover in the game, all taken from real official map data! That adds up to 1/40th of the world's surface area. There's islands, deserts, cities, rivers, bridges, roads, convoys... you just keep discovering more every time you play.

Next Month

We'll be bringing you more hard facts and tips for this awesome game in next month's CU Amiga Magazine, so make sure you don't miss it.



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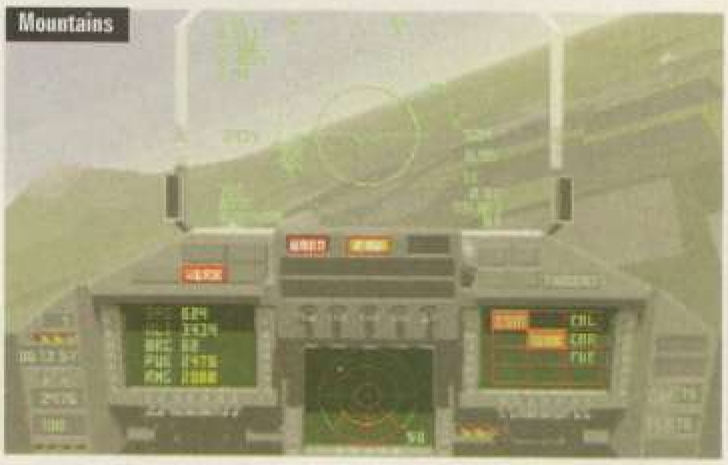
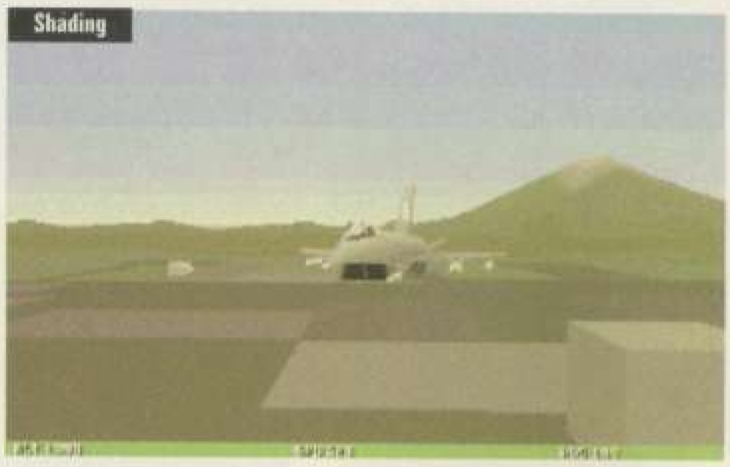


Mountains



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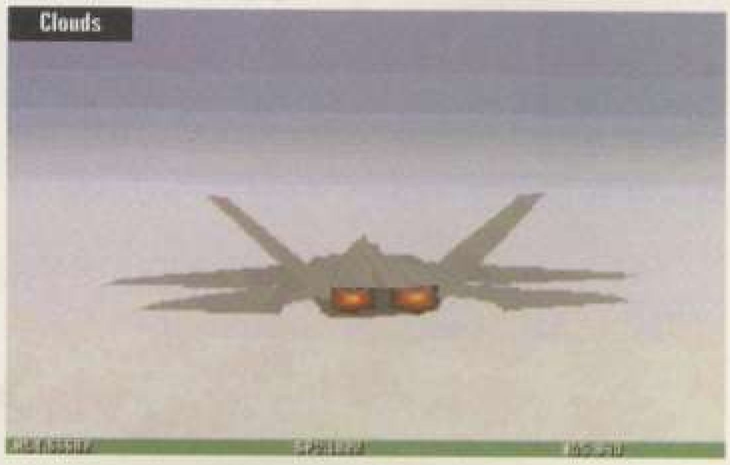

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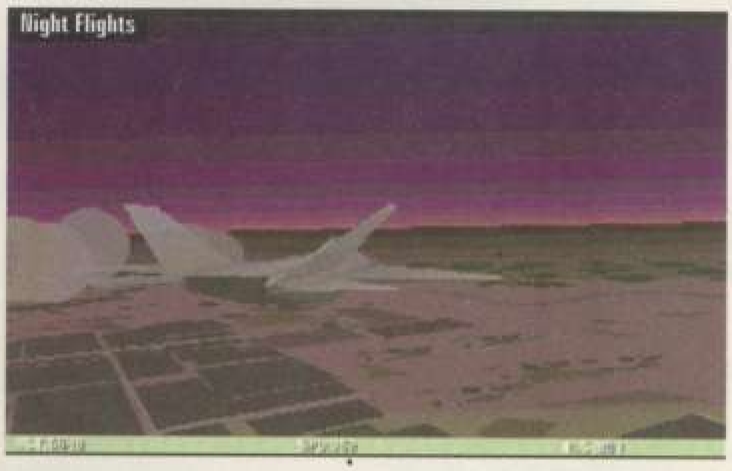
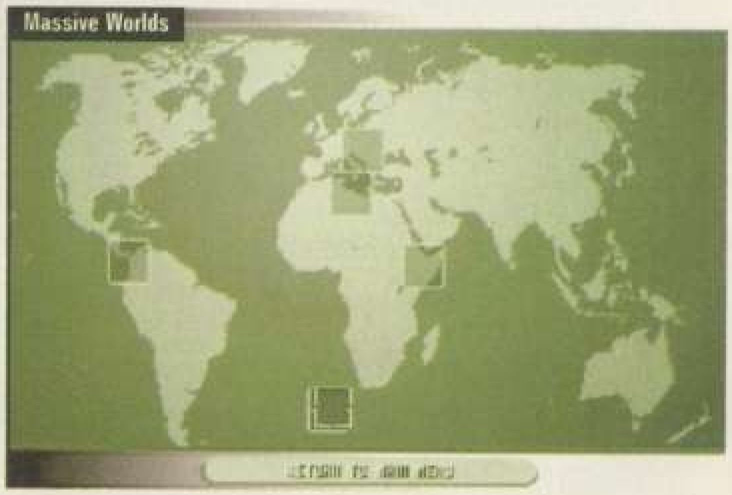


Night Flights



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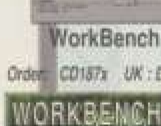

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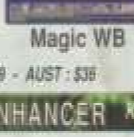

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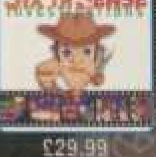

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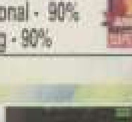

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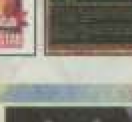

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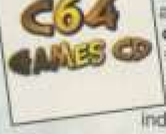

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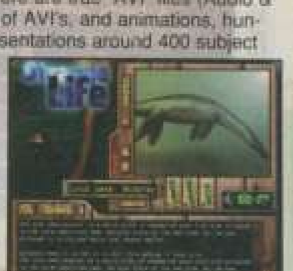

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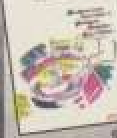

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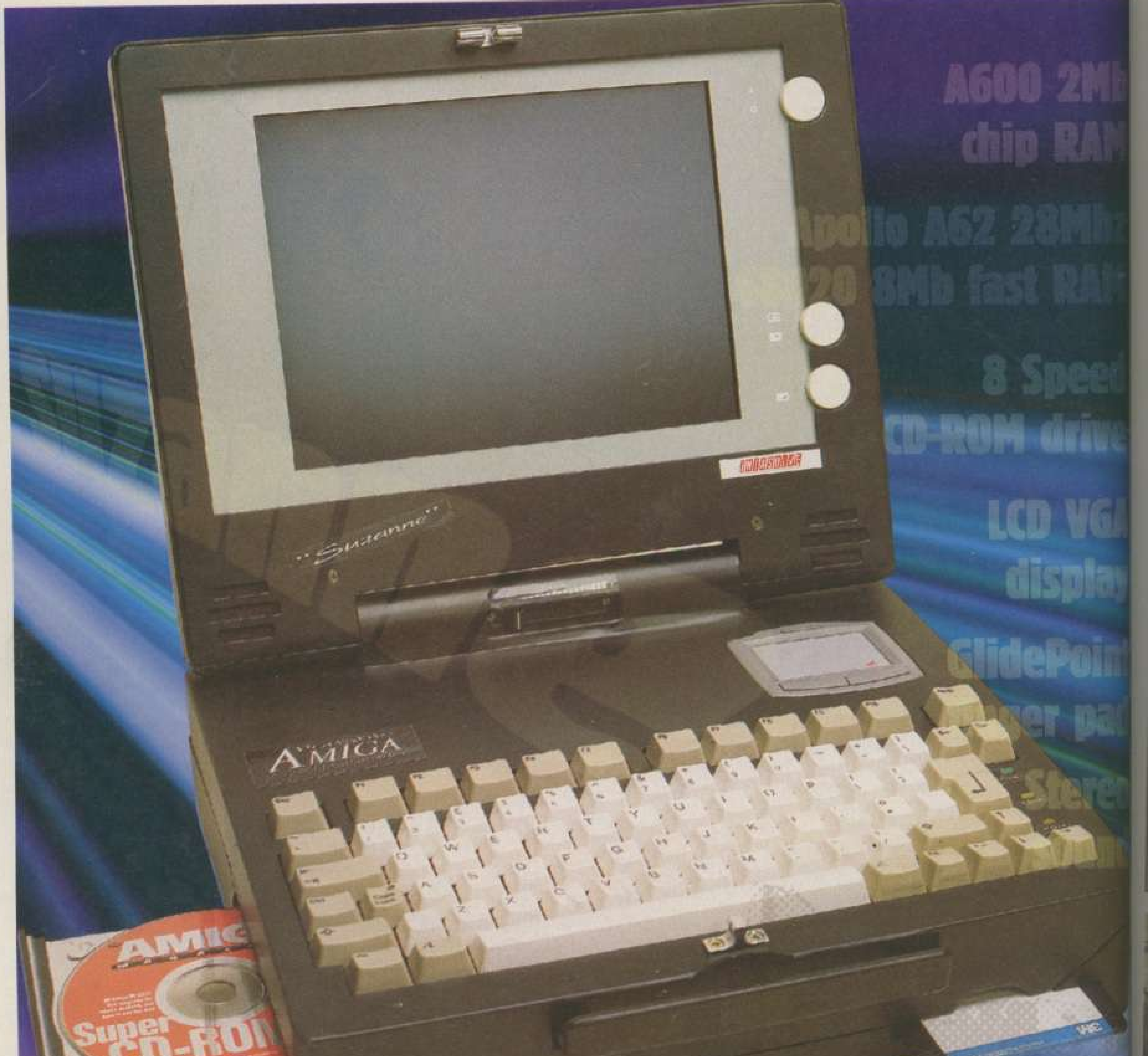
Suzanne

The Portable Amiga

This month's DIY Scene tells the story of one man's mission to construct a portable Amiga. Simon Archer recounts how he built 'Suzanne'.


A600 2Mb
chip RAM
Apollo A62 28Mhz
020 8Mb fast RAM
8 Speed
CD-ROM drive
LCD VGA
display
GlidePoint
finger pad
Stereo
"Suzanne"
AMIGA
Super CD-ROM
Suzanne

This feature follows in the trend of the DIY series, but is not intended as a 'How to build a portable Amiga' tutorial. The techniques involved are clearly well beyond the capabilities of most DIY competent Amiga users. However, they may be useful to readers wishing to modify their Amiga setups, as DIY 'towered' Amigas become more popular with Amiga owners.

Those who attended the recent 'World of Amiga' show in London may have seen 'Suzanne' at the CU Amiga stand. Suzanne is a portable Amiga 600 complete with its own power supply (but no batteries), LCD monitor, CD-ROM, stereo sound, 68020 accelerator and Glidepoint touchpad as a mouse replacement. This would be impressive enough coming from a commercial company like the mythical PAWS system but it verges on legendary given that it's one man's part time DIY project.

Suzanne's creator, Simon Archer, gives his account of how he constructed Suzanne.

Donors to the rescue

The idea of building a portable Amiga was one that I've always been keen on and the kind donation of a monochrome LCD VGA monitor seemed a very good starting point. The next step was to decide which Amiga it was to be based around. Because of its size and the fact that they were easy to obtain, the A600 seemed a likely choice.

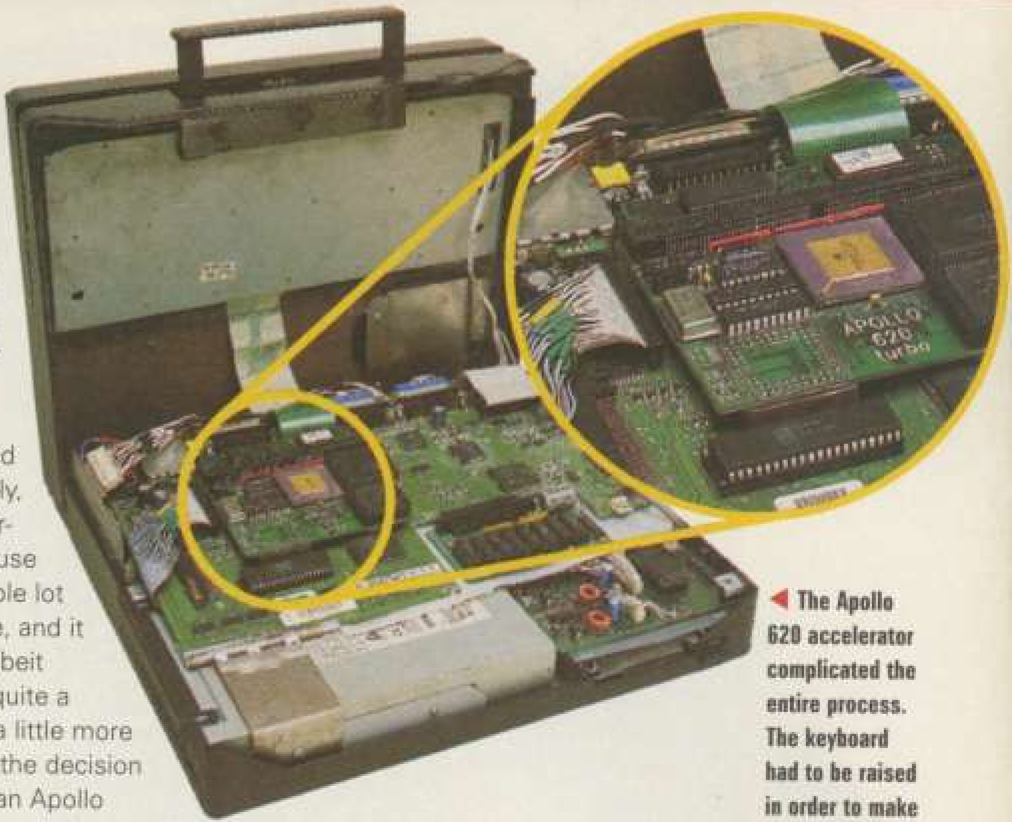
So work began connecting up the components. A quick scan of Aminet revealed the plans to connect up a VGA monitor to the Amiga's 23 pin video port. After constructing the adaptor, and connecting the monitor, it didn't show a PAL screen. After a quick monitor driver change to MULTISCAN: Productivity, and palette adjustment, away it went. It was necessary to alter the palette settings as the LCD displayed some rather nasty 'chromanoise' with the default palette settings. Chromanoise is caused by two clashing colours being placed next to each other resulting in interference at the join of the colours. Slight adjustments at-a-time were made to achieve the optimum display. This was a critical step in the project, because if this stage hadn't worked then the whole thing would have been a waste of time and effort.

So the setup now consisted of a monitor with power supply, A600 with power supply, external disk drive, mouse and mouse mat. Hardly portable! The whole lot was installed into a flight case, and it became a moveable object, albeit bulky. This installation lasted quite a while until the time came for a little more power out on the road. I took the decision to upgrade the machine with an Apollo A620. This gave the machine a whole new lease of life but also quite a few headaches. The accelerator card is not one of the easiest cards to fit and once fitted it refused to stay fitted.

Because of the design of the A600, with its surface mounted technology, there is no real way to expand it. Apollo have got around this problem using a PLCC socket underneath the accelerator to clip on top of the 68000. This doesn't work very well, as the socket keeps working its way free. Once the casing of the A600 was put back together it was found that the pressure kept the board in place – not ideal, but a solution!

As this system was starting to grow into a phenomenal size, the time had come to install all the collected components into a case, and power everything from one power supply. As the CD-ROM was being powered from the PC supply, this seemed the ideal option, as it was small and details were available on Aminet that allowed you to power the Amiga from it. The monitor used a 12V DC supply so that was no problem. I laid out all the parts and work started on converting the PC supply to run all the components together.

All the components were now powered by the PC supply but it was just a mess of circuit boards piled up on the bench. It was time to start on a custom built case which would house all the parts neatly.



◀ **The Apollo 620 accelerator complicated the entire process. The keyboard had to be raised in order to make some room.**

Specifications

A600 ECS 2Mb Chip RAM, built-in power supply
Apollo A620 28MHz 68020 with 8Mb Fast RAM
8 speed IDE CD-ROM drive
LCD VGA display
Stereo sound
Glidepoint finger pad

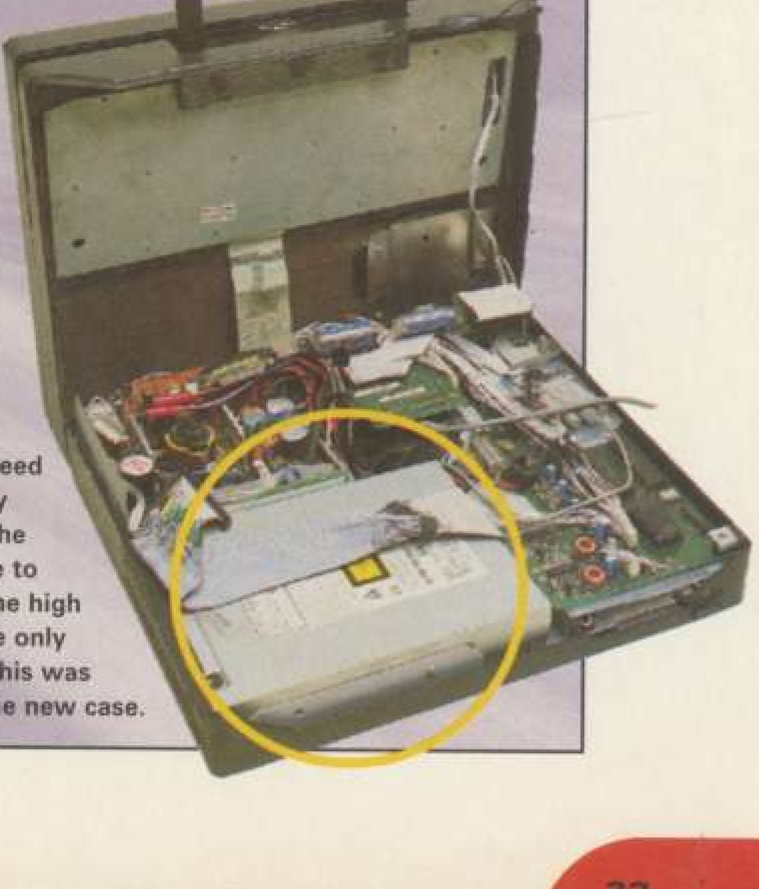
▲ **Suzanne became the centre of attention at CU Amiga's stand at the World of Amiga show.**

CD integration

When the machine was purchased, it came with a Squirrel SCSI interface, and I decided that this would be ideal to run a CD-ROM drive. I connected the Squirrel up to a Sony CDU55s drive and a standard 200W PC power supply was used to power the drive. The standard Commodore CD filesystem was used and it was up and running in minutes. One problem arose, as a result of having the Squirrel hanging out of the PCMCIA port and acquiring an extra power supply: the machine wouldn't fit back into its flight case. Since relocating the Squirrel was impossible, I contacted HiSoft.

They made the suggestion that they could supply me a unit in 'kit form' so that it could be built to suit. This seemed too much of a hassle so the SCSI concept was abandoned. Having seen ATAPI software available on Aminet, the concept changed to incorporate an IDE CD-ROM drive.

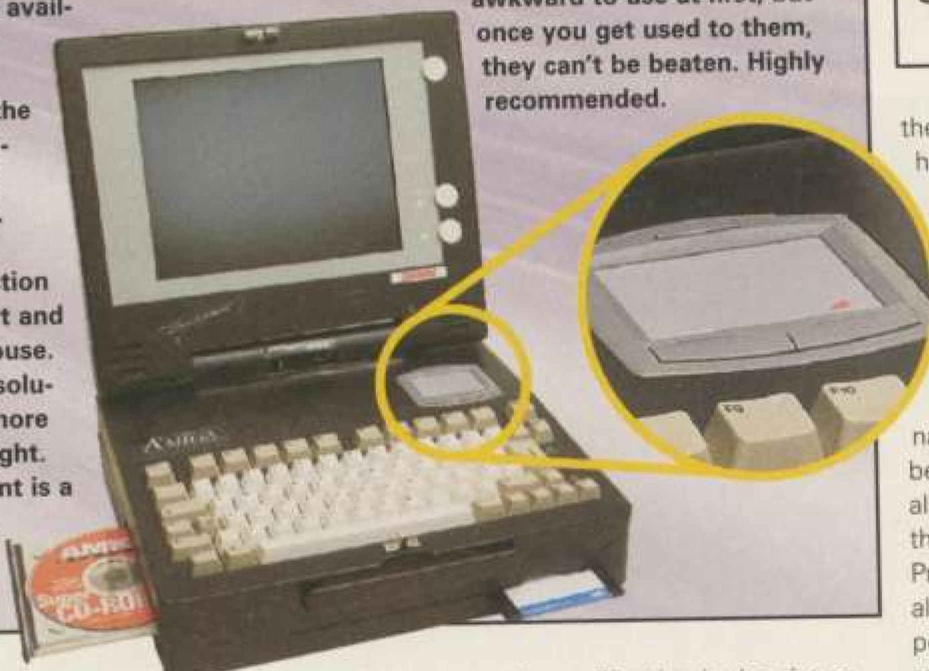
This seemed a much better idea, as there would be no need for extra interfaces to try and squeeze inside. An 8 speed NEC device was bought very reasonably which led to problems with cables. At the time, converter PCBs were not available to allow 3.5" devices to be connected to the high density connector inside the Amiga. The only option open was an adaptor cable but this was not long enough to reach the drive in the new case.



Glidepoint fingermouse

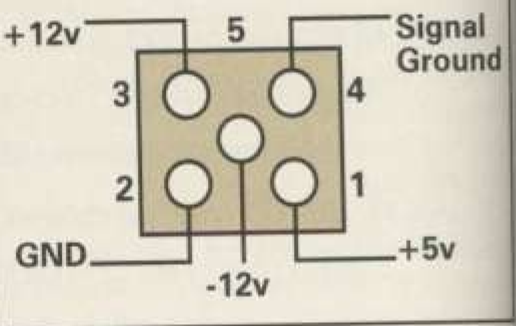
The idea was to have a trackball device inside the casing, so there would be no need for carrying an external input device such as a mouse. This turned out not to be. Physically there wasn't enough room to fit it unless the trackball itself was about 1/4" in diameter. A quick scan of the advertisers in CU Amiga showed that an item known as a 'Glidepoint' was available. This is the type of input device used on the modern PC notebooks and so is extremely small. The 'Glidepoint' required connection to the serial port and replaced the mouse. It was an ideal solution, being no more than 1/4" in height. As the Glidepoint is a serial device it meant losing the serial port of the A600. It was either that or have no input device. Fitted into the small space at the rear of the keyboard, it worked very well indeed.

I would definitely recommend one of these units to anyone looking for an alternative to a mouse. They are small, easy to use, there's no moving parts and they never need cleaning. They can be awkward to use at first, but once you get used to them, they can't be beaten. Highly recommended.



PC power supply wiring

All these supply rails are available from the motherboard connector.



The A600, the monitor and the power supply were all stripped down to their bare bones so that some initial dimensions could be attained.

A little juggling around with the locations of some components revealed that it should all fit into an area about the size of the monitor panel. This was advantageous in as much that it kept some aspect ratio to the case, and did not present itself as being out of proportion like some A1200 portables that I have seen. Obviously, it is out of the scope of an article such as this to go into detail about the construction of the case itself, suffice to say that it required some basic sheet metal skills (Simon is being modest here, it required sophisticated sheet metal skills-Ed) and a few well chosen cutting tools.

Cable capers

Once I'd chosen the physical location of the components, most of the leads needed to be extended or modified. The first of these was the hard drive lead. As on all A600 and A1200 models, the IDE interface is of the high density 44 way type as found in most notebook portables. This is not a problem when connecting hard drives, but CD-ROM drives are only available with the standard density 40 way connection as used on the 3.5" drives.

I modified the cable so that it would accept both styles of header. As you can see by the picture, (picture of cable) this was accomplished by cutting the original cable in half. A length of 44 way standard pitch (2.5mm) cable was spliced onto each end of the cable making it longer and enabling the 40 way header to be crimped onto the lead. You can see the modification in the picture by the two rows of black heat shrink used to insulate the 44 solder joints.

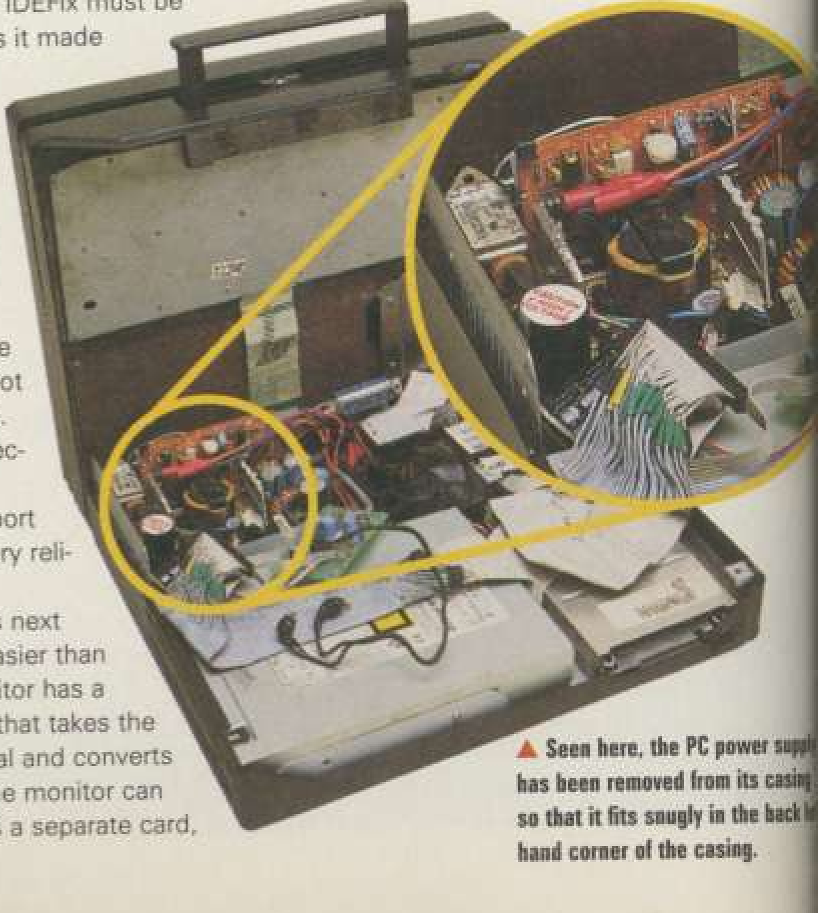
In 44 way setups, pins 40-44 carry the power for the drive, which is normally taken through the four way power connector on 3.5" mechanisms. These four lines were separated away from the rest leaving a stretch of cable 2" long with only 40 lines. The 40 way header was crimped on, leaving the last four to pass-through to the 2.5" drive. Connection was made to test the setup, and after installing the software, everything was found to work straight off.

The work behind IDEFix must be commended here, as it made the job of installing the CD-ROM so much easier. Ideally speaking, a buffered interface, like those now sold by EyeTech, should have been used in the installation of the CD drive but were not available at the time. That said, the connection of the drive straight to the IDE port has proved to be very reliable to date.

The monitor was next and proved to be easier than expected. The monitor has a display card inside that takes the incoming VGA signal and converts it into something the monitor can display. As this was a separate card, the cables connecting to the monitor panel had to be extended. I used 0.7mm plain single-core cable and used heat shrink to insulate it. The originally created video port adaptor was also stripped out of its hood and modified onto the lead running to the display card.

With hindsight, a scandoubler should have been manufactured so that the native PAL modes of the A600 would have been promoted to 31KHz. This would have allowed the use of all screen modes rather than having to promote to MULTISCAN: Productivity. Maybe next time! There were also some controls for screen sensitivity, position and color cycle mounted on the rear of the monitor casing which had to be relocated. These ended up mounted on a piece of veroboard and were made accessible in the side of the new case. The front controls for brightness, invert and contrast were able to be left on the monitor panel, and are nice and accessible in this position.

There was also a small circuit board that was a high voltage generator for the florescent backlight, and it was decided to moun this behind the monitor panel inside the lid. A quick test showed that everything was st working OK. It proved far more convenient to test at each stage as it happened, rather



▲ Seen here, the PC power supp has been removed from its casin so that it fits snugly in the back hand corner of the casing.

than to modify a dozen things then find out something doesn't work.

Insulation factors

Luckily the disk drive cable was long enough, although the power cable needed lengthening. The same technique was used on this lead as was used on the others. With a metal casing around all these components, insulation was a prime factor.

Plastic sheet insulator was used extensively throughout the project in order to eliminate any shorts that may have been potentially dangerous, or even fatal. Given the high voltages and currents available to this project, and the metal casing, good grounding was vital. An earth potential isn't good for a lot of electronic products, and decoupling and insulation was carried out at every available point.

The casing was originally intended to house a 3.5" hard drive, but with the problems encountered by heat dissipation from the powerful supply, the plan was changed. The original 2.5" hard disk was fitted, and the extra space freed up was used to house the cooling fan taken from the power supply. This had the extra benefit of helping to cool down the Apollo card and memory.

I fitted all the pieces together to see any problems that may have sprung up during development. It all seemed to go well until disaster struck. The whole case had been built but the pieces hadn't been measured with the Apollo card in place. Once this had been fitted to the motherboard it was impossible to fit the two halves of the case together with both the Apollo and the keyboard in place. Measurements had to be taken to enable a remedy. The easy solution was to mount the keyboard on rails, which stepped the keyboard down into the case.

This led to it having a nice flush appearance, but didn't allow enough room, so the rails were then modified, and the keyboard angled up at the back. This gave just sufficient room to install the Apollo and also gave the keyboard a nicer, more natural feel as it seemed to lean toward you. That was one problem solved .

Tidying it up

Not having much room left, I decided that the portable should have some sound capability. This was in the form of a small kit available from a high street electronic shop.

Rated at 750mW output fed by the Amiga sound output, it seems to overdrive to the stage of actually being quite loud. The output was fed into two 1.25" moving coil speakers mounted in the lid just below the monitor panel. An external volume control was also needed as the sound level was just a bit too high to be comfortable, so I mounted a sliding potentiometer onto the hinge of the case just below the monitor panel.

The last job was to take all the vacant sockets and relocate them to the rear of the case. These turned out to be straight forward – simply a matter of purchasing sockets and plugs and lengths of ribbon cable to extend the ports far enough. As these headers are crimp on types, this stage of development was surprisingly quick. One fiddly part was the removal of the onboard mouse port. This had to be removed due to space restrictions, but was later reinstated on a length of multi-core cable and taken out to the back of the machine.

Fabulous Fablon finish

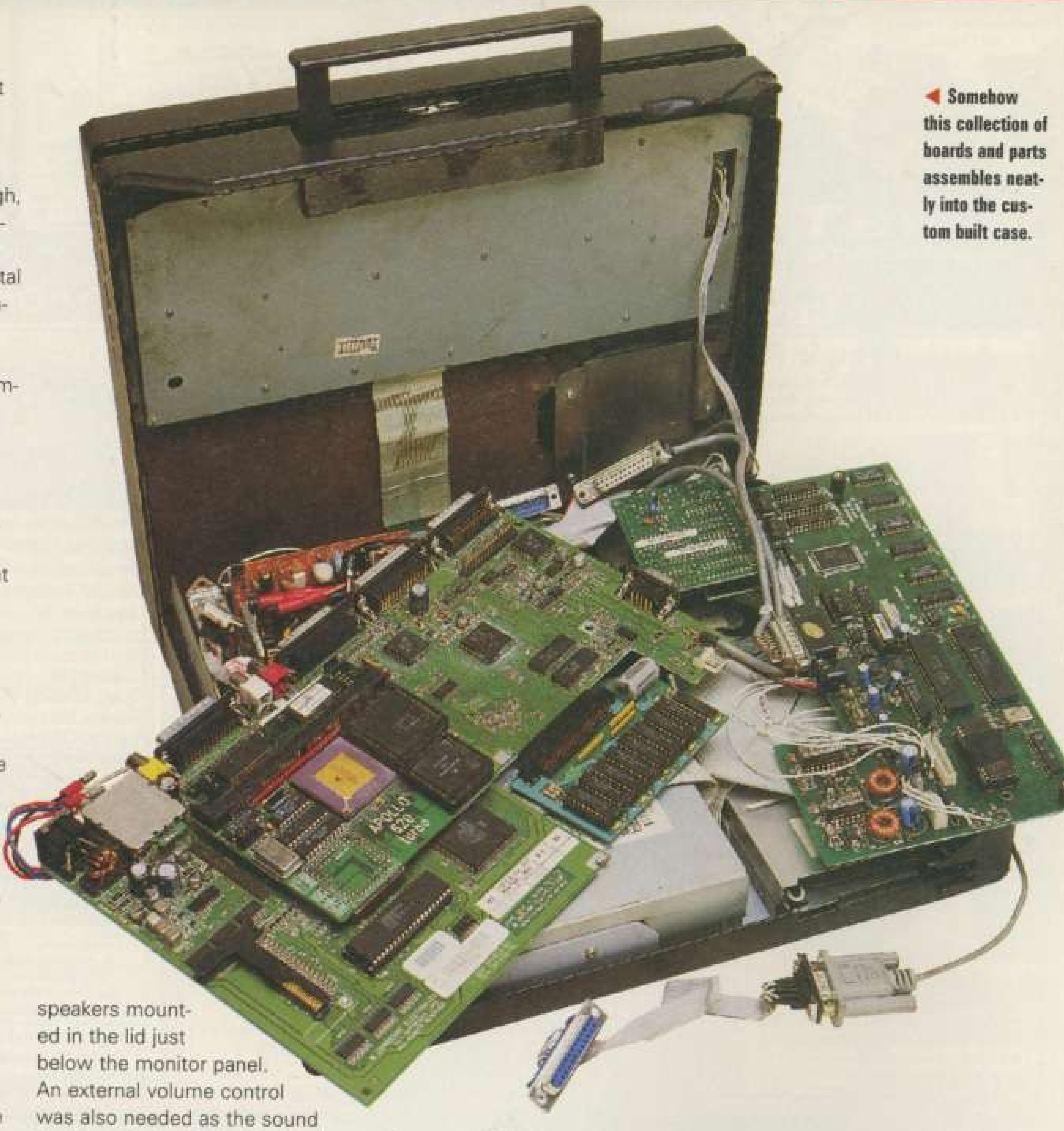
There we have it, all we needed now was to finish the case to make it a little more pleasing to the eye. The original intention was to have it industrial coated but as time became more precious and the Amiga show got nearer, an alternative was imperative.

The final solution was to use black Fablon coating which was cut to shape and used to cover the bare metal construction. That just left some labels, which I ran up on a laser printer using PageStream and covered in transparent Fablon to protect them.

All in all, the finished item is practical, robust and compact, if a little heavy. As an after thought it may have been possible to have made the power supply on a tray, thus being removable. This could then be replaced by a battery that could be used while out on the move. Once at home, the power supply could be installed and the full power achieved without worry of discharge times. Maybe something to think about on the next one, eh? Finally, no. Suzanne isn't for sale.

Should anyone attempt to use the techniques outlined above, they do so at their own risk. Neither Simon Archer nor CU Amiga accept any responsibility for any loss, damage or injury caused from undertaking of the procedures detailed here. ■

Simon Archer



◀ **Somehow this collection of boards and parts assembles neatly into the custom built case.**

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Glidepoint	Power Computing
A600	Second Hand
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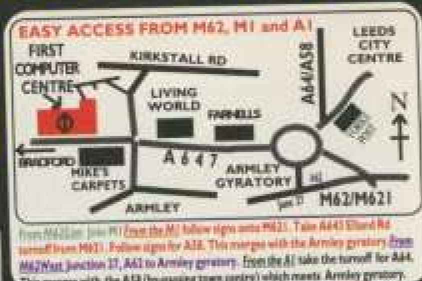

From M62 East Junc M1 From the M1 follow signs onto M621. Take A643 Elland Rd turnoff from M621. Follow signs for A58. This merges with the Armley gyratory. From M62 West Junction 27, A62 to Armley gyratory. From the A1 take the turnoff for A64. This merges with the A58 (by-passing town centre) which meets Armley gyratory.

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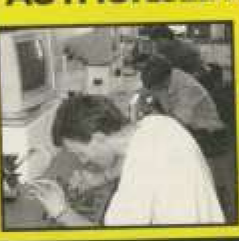

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Screen Scene

Another good month for Amiga games sees the emergence of two potential classics, some timely re-releases from Guildhall and the first game in Vulcan's new Mega Series...

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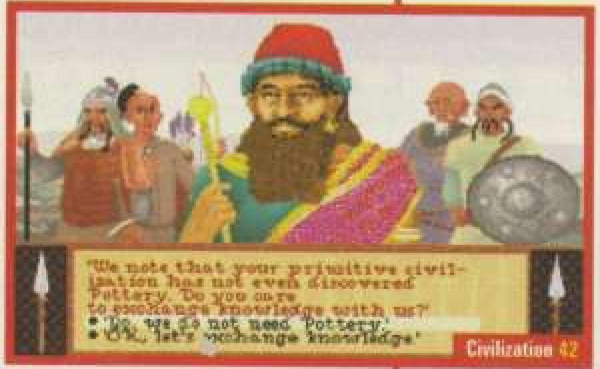
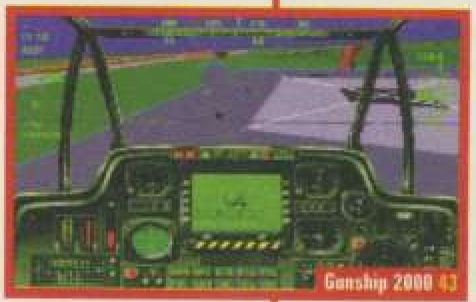


"We note that your primitive civilization has not even discovered Pottery. Do you care to exchange knowledge with us?"
• 'No, we do not need Pottery.'
• 'O.K., let's exchange knowledge.'

Civilization 42



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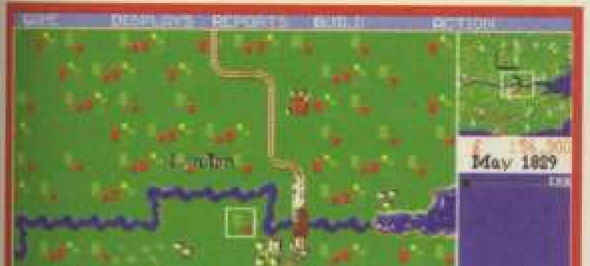

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OnEscapee

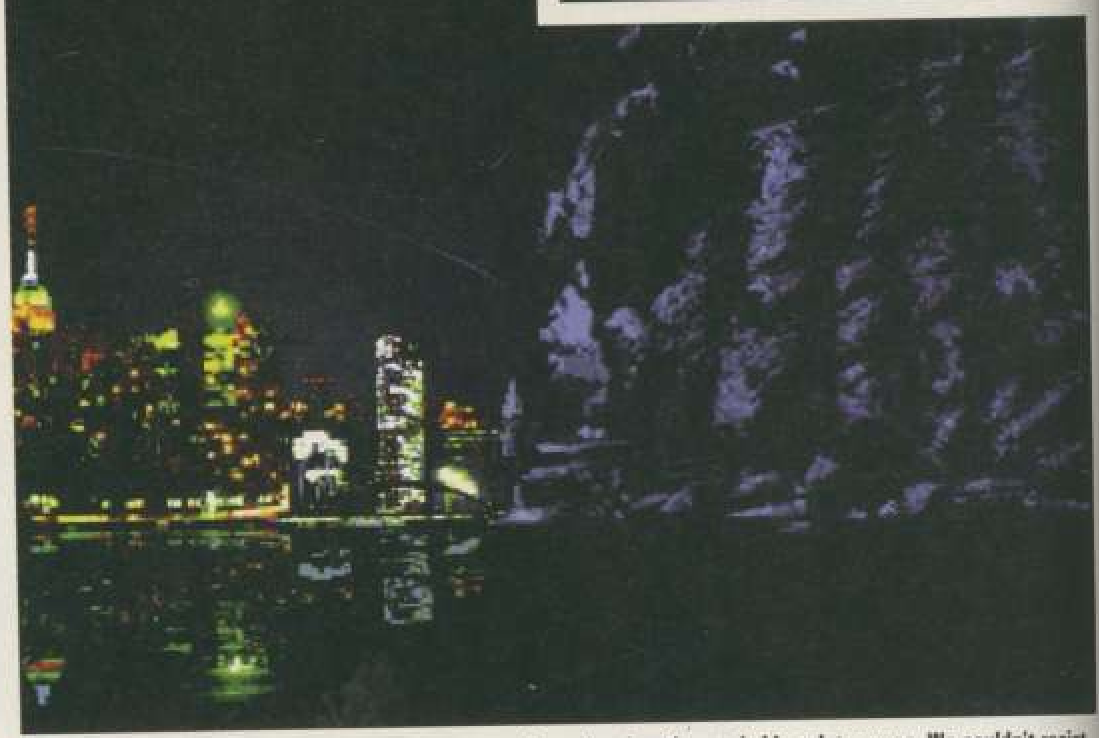
It has a name that no-one understands, graphics everyone drools over, and gameplay that's similar to Another World. Everyone's talking about it, but Andrew Korn listens to the guys who know.

When we first saw the screenshots of OnEscapee on the Team Invictus website, we were intrigued. Obviously along the lines of the legendary Flashback and Another World from French software house Delphine, OnEscapee looked really rather nice. When we got our hands on a demo and saw the thing moving, our jaws dropped. The quality of animation, the effects, the sheer attention to detail signalled that we had a game on our hands that could really stand out, something that could be leading the way rather than following. We asked Akos Divianszky and Tamas Kozak of Hungarian developers Invictus just who they think they are turning up out of the blue and doing something that looks so damn good.

"It's a strange story," Akos tells us. "Our team was born when Tamas (my neighbour) and I decided to make a Tanx game. I only knew BASIC and Tamas, who is the chief graphics man, had never even seen a mouse! We only had an A500, but we loved Tanx and started to develop a version with two teams of animals fighting each other with bows. Two things stopped us developing it: we realised that using characters from Disney movies is not a wise idea, plus our Amiga couldn't display hardware sprites and an extra wide display all at once.

I don't know if you know the feeling, but it was very hard when we realised we would have to start again. We were desperate to do something, and had just started another game when the A1200 and A4000 come out, and we realised their capabilities and started developing OnEscapee.

Until starting OnEscapee, there were just the two of us at Invictus. We decided that we must have a musician because our musical skills aren't enough for a professional game, so Levente Toth joined. A year ago a PC-programmer, Laszlo Mudrony joined, because many people asked for a PC version. Recently, to speed up work three more people joined: Tibor Mester, who does the rendered elements in the game, Csaba Kemeri who helps Tamas with artwork and Mate Lajtos with additional PC programming.



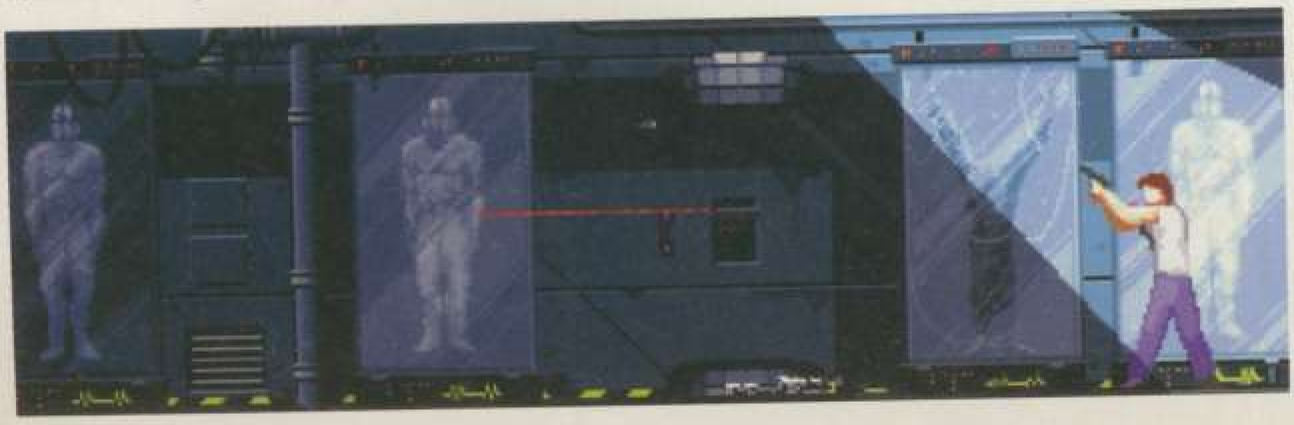
▲ The Hero falls to his death in one of many spectacular and eminently watchable splat scenes. We couldn't resist running that guy off cliffs and down lift shafts to watch one more darkly humourous death...

That title explained!

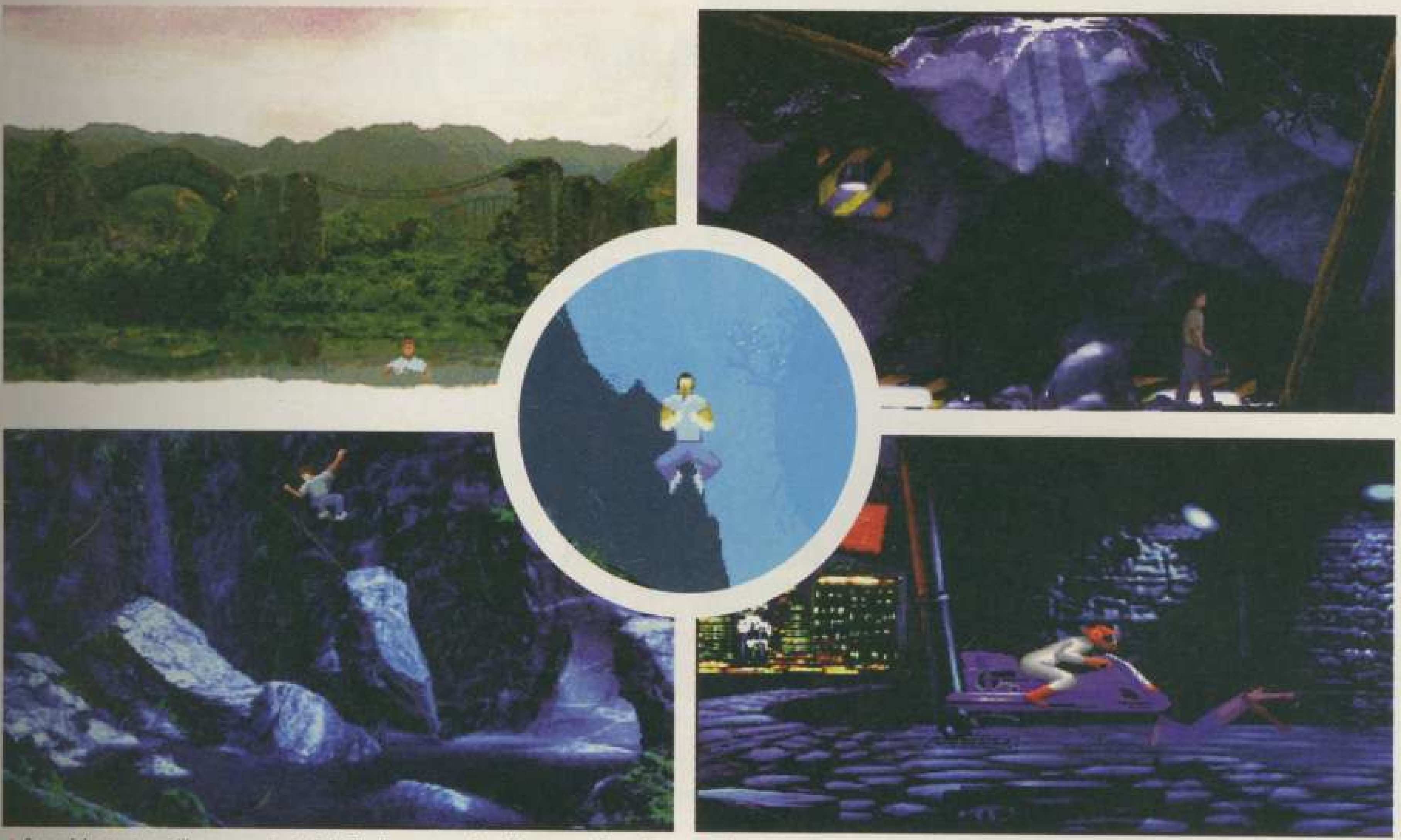
The title OnEscapee is in fact a compound of the words 'one' and 'escapee'. The hero is an escapee from alien kidnappers. The one is supposed to signify that he is the only escapee, to emphasise the 'one man against the world' theme. Certainly a bit more original than 'Dreams of the Future', the first working title. Does the game live up to the originality of its name? We asked Invictus what OnEscapee had to offer that Flashback and Another World didn't.

Graphics meister Tamas chips in, "Because it uses the AGA chipset, the gfx can be 256 coloured without decreasing CPU power, so more and bigger animated elements can be included in OnEscapee." No-one would turn their nose up at Another World with better graphics, but surely there must be more? Akos thinks so. "Not just the graphics, the gameplay and the music become better: you can listen to digitised music through all of the game. Several logic games are included too, some of which could be separate games. OnEscapee runs on standard screens, and can also be played with VGA monitors. We have decided to make a graphics card version of the game after we finish with the AGA".

What are they most proud of in OnEscapee? Tamas has a quick answer. "First of all I am proud of Akos' work. He has made an excellent background constructor, and a new full-screen, packed animation for-



▼ It looks similar to Another World but Delphines' offering never had all those flashy effects. The spotlight follows you around, just one of many neat visual effects.



▲ Some of the scenes you'll see as you try to help The Hero escape from his captors. There is a lot to see, from distant wildernesses to Bladerunner like cities and high-tech bases.

▲ If you like the screenshots, wait until you see them moving. Water ripples, rain falls, reflections move with the waves. If there is as much to do as there is to see, we are in for a treat.

mat (with which we can insert sound-effects frame by frame) to make my work easier. Graphically, the fourth level is the one I am most pleased with. It is set on the streets and it is the biggest (about 100 screens), the hardest, the nicest...

Amigas in Eastern Europe

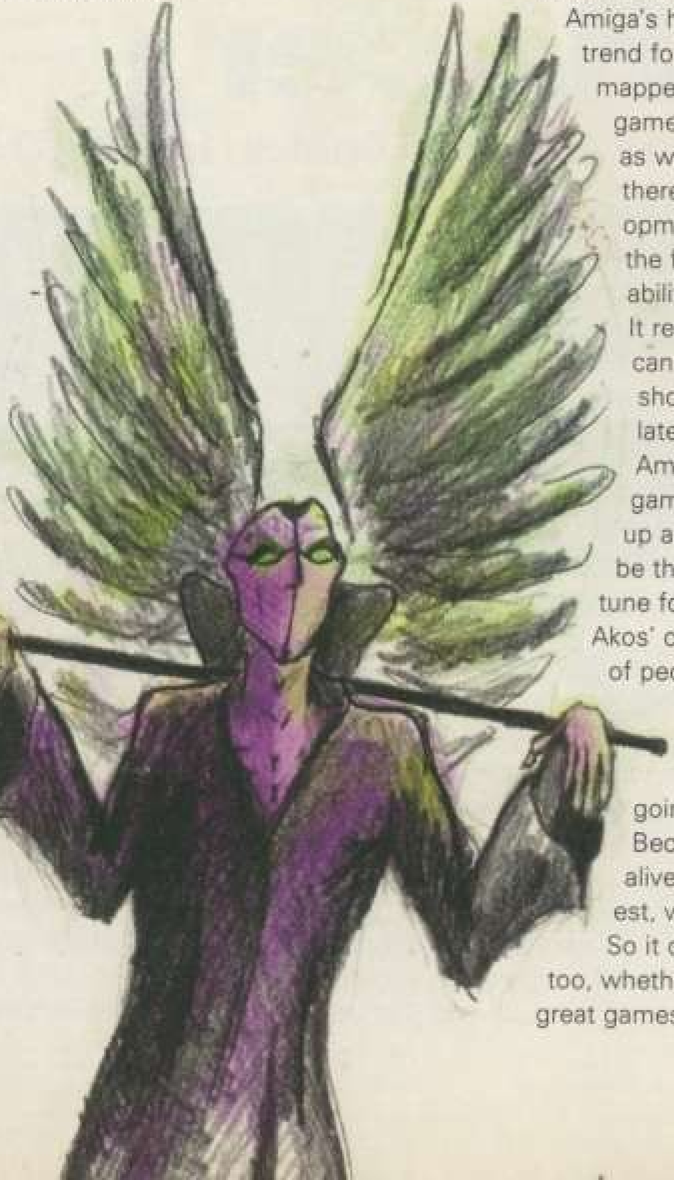
OnEscapee has a distinctly cyberpunk air to it. The main character – known only as The Hero – is on the run from powerful alien beings. There is a mood of claustrophobic oppression in it reminiscent of other Eastern European distopian fiction.

We've started to hear a lot more from developers in Eastern European countries, and it is interesting to see the different sensibilities of creators from these countries. We asked Akos about the Amiga scene in Hungary. "We haven't paid attention to the scene before, and we're sorry now as the scene in Hungary is great and very helpful. There are many Amiga IRC channels, mailing lists and more than six diskmags! There are famous demo groups too such as Faculty, Therapy, Impulse, Extasy, C.D.I, Frame 18, and the Power Team".

We asked what they see in the Amiga. Tamas says, "While working on OnEscapee, I have done some graphics for other companies on a dual Pentium 133 system. It is very fast but I had a lot of problems with the OS. I came to realise that the Amiga is much better, I don't like to work without the advantages of the Amiga, for developing graphics for a game like ours it is better".

OnEscapee is due for a release later this year from Sadeness Software, a company better known for making CD-ROMs noted for a high level of presentation. OnEscapee is their second signing, the first being the Settlers inspired Foundation. There is an interesting similarity to the two games Sadeness have picked up, both being the sort of game which the Amiga's hardware is suited to. Flouting the trend for goraud shaded Tri-linear mip-mapped 3D monstrosities, these are games that Amigas can do every bit as well as any other machine out there. With titles like these, the development teams creativity comes to the fore, rather than programming ability – however impressive.

It remains to be seen if OnEscapee can be a success. There have been a shortage of games for the Amiga of late, and even more of a shortage of Amiga games that could make games players on other platforms sit up and take notice. Could OnEscapee be the first wave of a reversal of fortune for the Amiga? We close with Akos' own words on the matter. "A lot of people say the Amiga is dying. It's strange, they said that years ago and the Amiga is still going. Why? Because we keep it alive, with our interest, work, and love. So it depends on us too, whether there will be great games or not!" ■



◀ An example of the original design artwork used in the production of OnEscapee.

The Shadow of the Third Moon

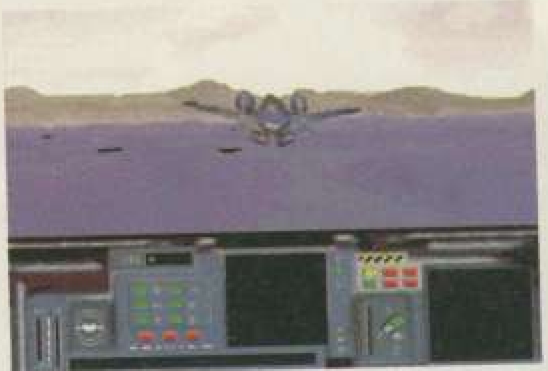
■ DFR: September ■ Developer: Black Blade ■ Publisher: Titan / Blittersoft © 01908 261466

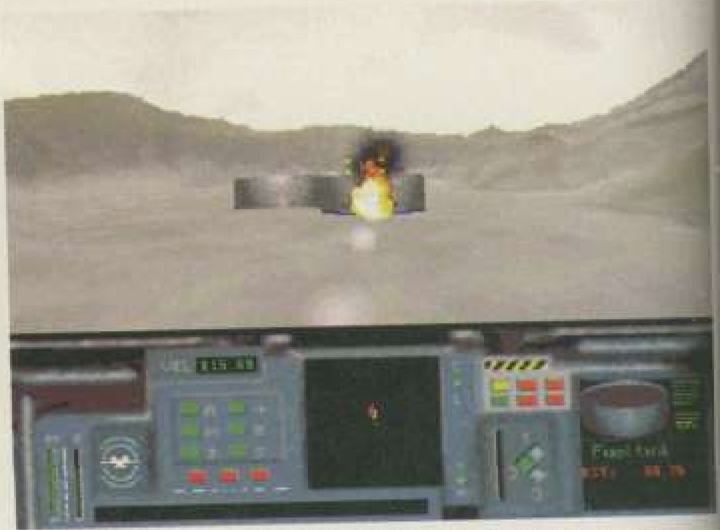
Italy has been associated with renaissances before. Black Blade design, the Italian software house responsible for TSotTM, clearly want to take on the role of the Leonardos of the Amiga games renaissance. Leonardis at any rate, as Black Blade design is headed by the irrepressible Francesco Leonardi, who talks up their 3dTIS landscape routine like it was something really special. Fortunately it is.

Voxel engine games have been around for a while now. They offer a reasonably fast way of providing a kind of 3D pixel based landscape, ideal for flight simulators. 3dTIS is Black Blade's variant on the Voxel notion, as pioneered by Novalogic for the Voxelspace 3D system used in Commanche on the PC. If you've seen this game or any of its descendants you'll have a fairly solid notion of what to expect. What you won't be expecting is how fast and smooth this system is.

Make no mistake, this engine is significantly smoother than anything Commanche had to offer, and given similarly matching CPU power, it wipes the floor with it on speed.

TSotTM really requires an '030 and a CD-ROM drive, but give it what it wants and prepare to be amazed. Check out those screen shots, the ones of the nice Vista-like landscapes. No, they're not the intro sequence, those are the in-game graphics. Plus they'll run at 12-13 frames per second on the kind of accelerator which costs less than a hundred pounds. TSotTM isn't just pretty when it comes to the ground beneath your wings. The various vehicles you will either fly or fight are good looking 3D objects which manage to look right for the environment, which is a rarity in this type of 3D landscape.





▲ These landscapes move! Yes, that's right, this isn't the intro sequence, this is the game itself. Fast, 3D voxel action with TSotTM.

Coupled with glossy high res rendered intro screens and some specially written music spooled from CD this is a feast for the senses. You have a good range of missions to fly, taking in an assortment of campaigns and some widely differing landscape types. Action is fast and fluid, and from what we've seen fun to play.

Prepare for major jaw dropping antics. ■

Andrew Korn

Street Racer

■ DFR: September ■ Developer: UbiSoft ■ Publisher: Guildhall / Epic © 01773 836781

UbiSoft, the French development team behind a number of Amiga titles in years past, are having a final fling on the Amiga with this truly weird racer. Released some months ago on the PlayStation and PC to not a little acclaim, and rather earlier on the SNES, this is the most mainstream title to hit the Amiga in a long time.

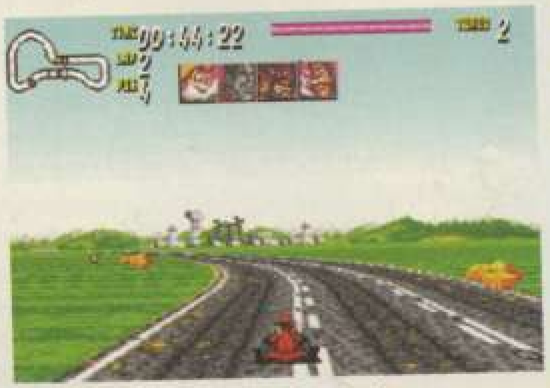
Street Racer on the Amiga gives nothing away to versions on the other platforms. The sprites seem slightly smaller than on other versions, but are impressively detailed and beautifully designed. The courses are pretty simple flat affairs, with none of this new fangled hills and valleys stuff, but the graphics are all that much prettier for it and the whole thing zips along at a breakneck pace.

Street Racer is a racing game written by people from another planet. An obvious inspiration is the brilliant Mario Kart, the game that made the SNES worth while. Unlike Siltunna, authors of previous Mario Kart alike XTR, UbiSoft clearly think that Mario Kart is lacking in the humorous silliness department, because they have taken it to a whole new level. The main thing you'll pick up on is that the guys who drive these cars around seem to think absolutely nothing of reaching a hand out and giving one of the competing drivers a swift and meaty slap in the face.

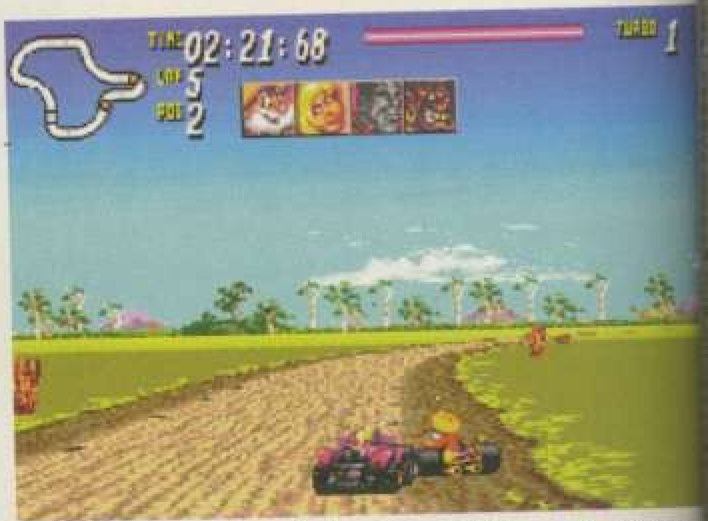
There are options aplenty to keep you amused if simply racing about isn't enough for you. There are various championship and race options, and there is also the rumble option that allows you to take off the gloves and get really violent – there's even a soccer option. The game supports up to four players and promises serious multi-player laughs.

This bizarre Street Fighter/Mario Kart crossover should be ready for the once over next month. Don't miss it! ■

Andrew Korn



▲Racing games, eh? Aren't they boring...



▲ ...not if you can get into fights with your competitors th aren't! Watch out, Hill Jr. is polishing his spiked knuckle dusters !

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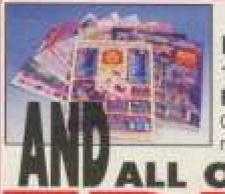

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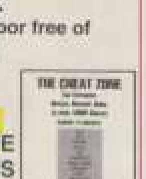

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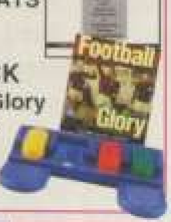

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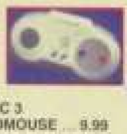

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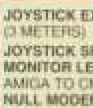

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Civilization

■ Price: £14.99 ■ Publisher: Guildhall
■ Supplier: Epic Marketing © 01773 836781

Sure it's old, but it's about as much fun to play as games ever get. Now it's on CD...

There aren't that many games that have been released over the years that can comfortably be called classics. Space Invaders could possibly be called one, as could Pacman. But in the more enlightened times of the last eight years, there's been a real shortage of original and exciting games. Oh, that isn't to say that there haven't been great games. There just aren't that many games that could be released now to the same sort of enthusiasm and excitement as Sid Meier's incredible Civilization – the ultimate in God Games.

Classic in the making

Like all classics, the concept is such a startlingly simple one, you wonder why no-one had thought of it before. But then again not everyone has the imagination of Sid Meier – the man also responsible for Microprose.

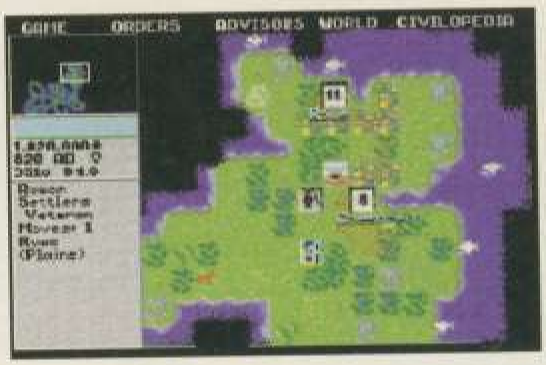
But the Sun shone upon the sleeping Earth

AGA vs ECS

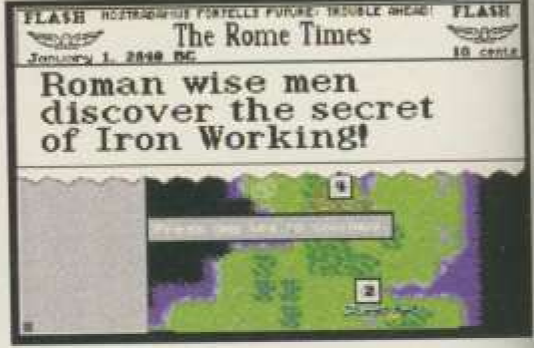
The CD version of Civilization comes with both AGA and ECS versions of the game. Both are click to play, which means you can play Civilization with quick access, no disk changes and none of those horrible installation worries.

Differences between the AGA and ECS versions of the game are purely cosmetic. The graphics files have been converted to IFF and redrawn, with a few simple animation effects thrown in. The obvious difference on starting to play is that waves wash your coastline and water flows down the rivers, but as you play the game you will find that all sorts of little details have been cleaned up and made to look more professional.

Interestingly the images have been left in IFF format, so the more adventurous gamers amongst you can just load the images into Ppaint and then do your own graphics.



▶ OK you aren't exactly going to be blown away by the graphics, but they are functional enough and clear to use. It's the gameplay that'll bowl you over.



FLASH FLASH
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Roman wise men discover the secret of Iron Working!

You start with a small band of people and limited resources. Your map extends only as far as the eye can see – the rest of the world is there to be discovered – and from that point you must travel the globe, advancing your people and your society, taking them through the technological and historical ages, until you reach the modern day. Believe me, it sounds a lot simpler than it is. Other civilizations grow up around you, and competition for world domination – fierce to begin with – gets steadily stronger.

Visually the game is a little simplistic – a throwback to its VGA PC beginnings. Viewed from above, a simple tile-based map expands as you explore, with towns, people and items shown as roughly the same size a la the Ultima series. There are cut scene stills now and again to brighten everything up, but as your brain is going to be kept well and truly occupied by the game itself, the look is hardly worth worrying about.

Why all the excitement?

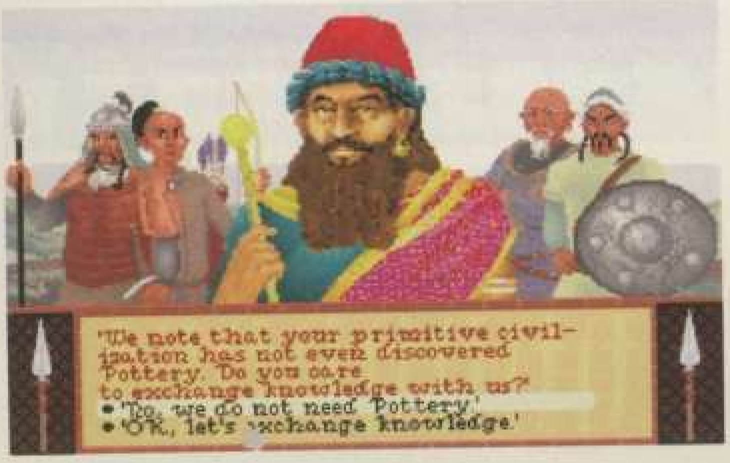
You might ask yourself, what's the fuss? The game has been released and re-released many times, so why should Amiga owners be get sweaty over this one?

Interestingly enough, it's the first time this game has appeared on CD-Rom, and even more interesting it's the first Amiga CD-Rom title to be sold in the shops ever. Not a CD32 title that will run on an Amiga, but a bona fide Amiga game on CD-Rom. Could the retail tide finally be turning? Are we to step out of mail order hell into high street heaven? Could be!

Asking someone to review a game like this in a page is like trying to explain War and Peace in a paragraph. The weighty manual and enormous amount of options in the game would take half this magazine to explain, and the sheer subtlety of the game design is something you experience as you play it, rather than something that leaps out at you. This is not a game for the faint hearted, as it will take some work to get into leading your civilization to success, but the rewards are more than evident. Ask the number of people who still play it, six years after its original release, or the number of people who still call Andrew and ask him how to get around the notorious hard drive installation routine of the original Amiga version, and they will tell you that this a game you don't tire of.

The freedom of the game design means that even if you win, you can jump right back to the start and play a completely different game, with different challenges and a whole host of new challenges. Perfection. There is no other word for it. ■

Tony Dillon



'We note that your primitive civilization has not even discovered Pottery. Do you care to exchange knowledge with us?
- 'No, we do not need Pottery'
- 'OK, let's exchange knowledge'

▼ You can interact with a variety of historical figures. I just wish Hamurabi would shut up about the damn pottery!

CIVILIZATION CD-ROM

■ Workbench version	Any	Graphics	75%
■ Number of disks	CD	Sound	n/a
■ RAM	1Mb	Lastability	91%
■ Hard disk installable	Yes	Playability	92%

OVERALL
One of the best games ever produced.

88

Gunship 2000

AMIGA SUPERSTAR

■ **Price: £7.99** ■ **Publisher: Epic Marketing ✆ 01302 890000**

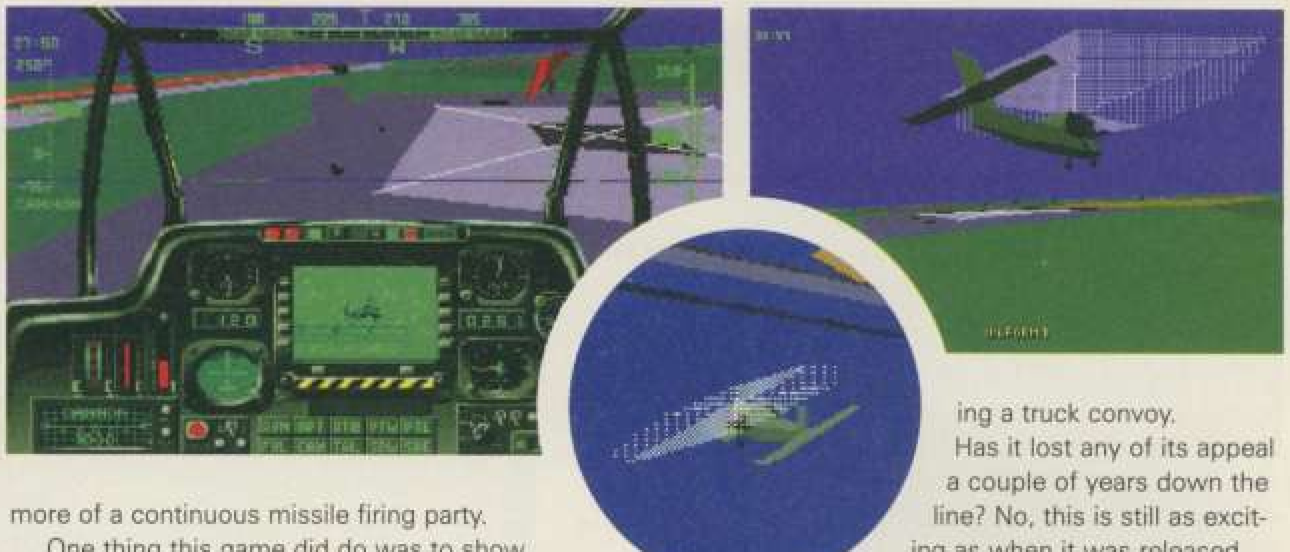
Now this is what I call a flight simulator. None of your long distance weapons and targeting here, just plain old close-up dogfighting – with modern weaponry, of course. The original Gunship still has to be one of my favourite games ever and I can't remember how many days I lost playing it on my trusty old Commodore 64. There have been many different helicopter simulators since then, but somehow there hasn't been one with the same level of involvement or excitement as Gunship. That is, of course, until the release of Gunship 2000.

Originally designed for PCs, somehow those boffins at Microprose managed to make it run at a fair speed on the Amiga, so everyone could enjoy this stunning flight simulator – quite a feat on an unexpanded A1200. As with the original, the game is based upon the AH-64 Apache gunship, one of the most powerful fighting machines in the world. Like most Microprose games, you are based in a large area with a finite number of targets.

The game engine creates a series of missions by randomly selecting pairs of targets for you. There are no campaigns as such, more of a continuous missile firing party.

One thing this game did do was to show the world that not all simulators had to be flat and boring. Gunship 2000 featured the most dynamic terrain of its time, with realistic hills and valleys (just right for low level flying, then popping over the top to take out a few tanks), the most believable action seen in a flight sim – you really did feel like you were flying the thing, and thanks to the random mission generator, the most varied missions seen yet.

One minute you were photographing an enemy installation, the next you were bombing a truck convoy.



▲ **It's got guns, but it's not a ship. Gunship 2000 is about helicopters, but we can forgive it 'cos it's great.**

Has it lost any of its appeal a couple of years down the line? No, this is still as exciting as when it was released. OK, it may not have flashy texture mapping like TFX, but it's certainly guaranteed to keep you up every night, from now until Christmas. ■

Tony Dillon

Graphics 87% Sound 85% Lastability 90% Playability 92%

- **Workbench version**........................Any
- **Number of disks**............................4
- **RAM**..1Mb
- **Hard disk installable**....................Yes

90%

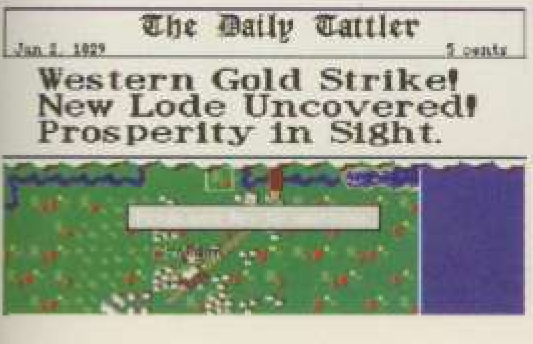
Railroad Tycoon

AMIGA SUPERSTAR

■ **Price: £7.99** ■ **Publisher: Epic Marketing ✆ 01302 890000**

OK, apart from the people who created 'Southern Belle' for the ZX Spectrum, who would have thought that a game about trains that didn't involve running along one shooting at things, would be such a major success? That irresistible old Sid Meier, that's who. Once again, he took a relatively simple concept – that of the train set – and then added a whole new layer by mixing it in with Sim City. Voila, instant classic.

To explain, you are in charge of a railroad company, and like all these games you start with next to nothing, and your aim is to build it all up into something gigantic. You have at your disposal some workers, a little money, and a small plot of land. From this you need to build stations in the places where people are most likely to be, put more stations at places where people are most likely to want to go to, and then lay the track between them. The routes you select greatly affect the cost of building and the cost of running the service, which is all subsidised by passenger fares and other services such as mail trains. You have a huge map to cover, so you must plan wisely if you're ever going to set up that InterCity network you always wanted – one with more than three smoking seats and not quite so many screaming children.



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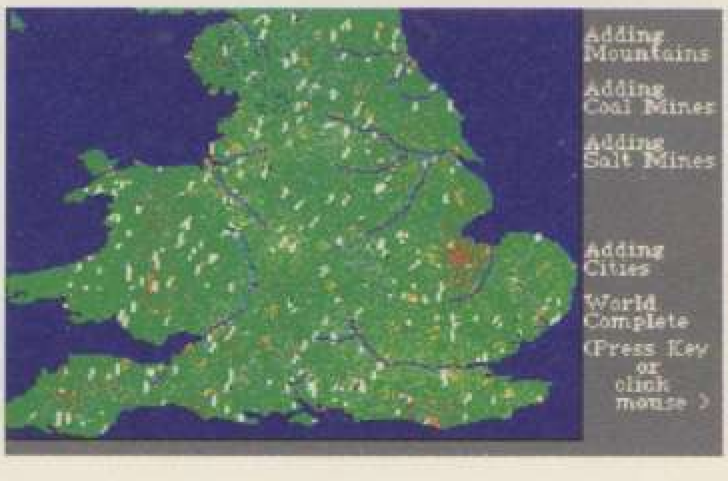


Adding Mountains
Adding Coal Mines
Adding Salt Mines
Adding Cities
World Complete
(Press Key or click mouse >

▼ **Sid Meier, eh? You gotta love 'im. Can't draw, but writes some of the world's finest games.**

The interface is friendly, and building things simply a matter of pointing and clicking, but it takes time to master – it's a fiendish strategy game, and you'll need a business head to stand a chance to win.

Abysmal installers

Railroad Tycoon and Civ have awful HD installers. Copy everything to the place you want it and install the fonts in your fonts: dir. Check the names of the floppies (don't assume they're similar) and assign these names to where you installed the game. This lets Railroad Tycoon run on A4000s too, something it otherwise won't do.

All that's left to say is that it's still an incredible title. This kind of game doesn't age – the challenge is still as fresh now as it always was. If you don't have it yet, what are you waiting for? ■

Tony Dillon

Graphics 70% Sound 75% Lastability 91% Playability 91%

- **Workbench version**........................Any
- **Number of disks**............................2
- **RAM**..1Mb
- **Hard disk installable**....................Just!

90%

The Strangers

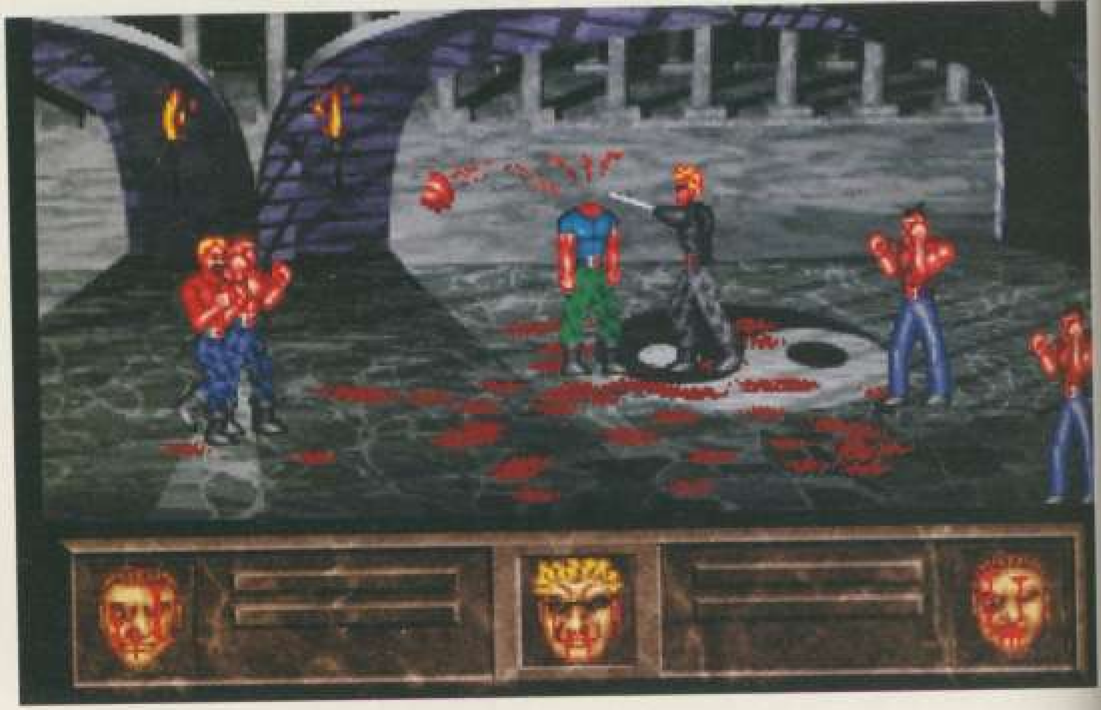
■ **Price: £24.95** ■ **Publisher: Vulcan Software** ✆ **01705 670 269**

Finding life a bit too safe and cosy? What you need is a bit of brutal street violence with guns, blood, decapitation sequences and a multi-player option.

AGA

While the gaming world goes crazy over the likes of Soul Blade, Tekken and Street Fighter EX, resplendent in their texture mapped polygon wonder, back at the ranch, Vulcan continue to uphold the rafters of the Amiga games scene with Strangers AGA. It's got violence, fancy 3D intro animation and more options than you can keep track of... but is that enough?

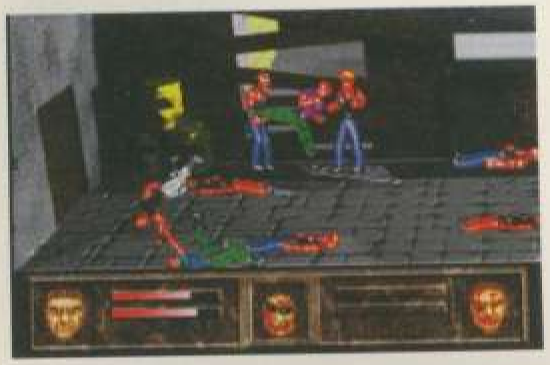
Strangers AGA is a CD only game. The astute will have realised it's for AGA Amigas too. Following the current trend, it's been snapped up from the flourishing European Amiga development scene by Vulcan for their Mega Series range of CD only games. Ablaze Entertainment from Slovakia are the team behind the game, and from the outset you can see the effort they've put into it.

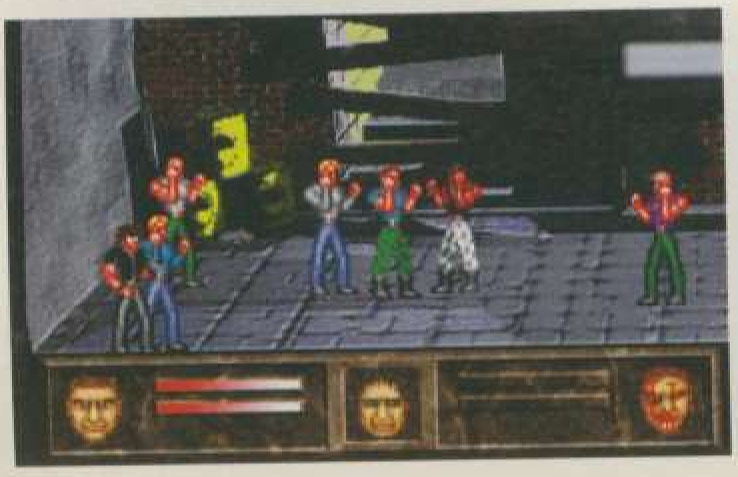


▶ **Shades of Barbarian creep into the game in one of the gory fatalities dished out by the boss.**

Post-nuclear landscape

After a couple of neat animated logos, a lame picture of what looks like rock duo 'Roxette' fades up, followed by a narrated introduction to the post-nuclear style world where the game is set. If you select English as the language (there's an impressive list of ten to choose from) you actually get the spoken introduction spooled off the CD. It's a bit cheesy and predictable, but let's not look a gimmick, sorry I meant a gift horse, in the mouth.





Moving swiftly on with a tap of the spacebar, an impressive animation of dubious relevance acts as a bridge to introduce the plot of the game, in which a car is chased through some streets and a tunnel, before the closing caption 'Once again, the head of the Mafia escapes from the hands of justice'. The animation is quite lengthy and so it's displayed direct from the CD. You'll need a 4x CD drive to watch it at full speed – played on an expanded CD32 it pauses every few seconds.

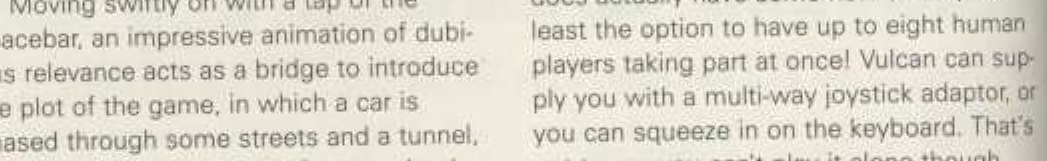
Still with me? Good. To re-cap the basic plan, there's this Mafia boss who needs sorting out, and you're the man for the job. You and who's army? You might well ask. Actually, you and 'your' army, if you've got enough friends to draw upon. While on the surface, this looks like a substandard Renegade clone (we'll come to that later) it does actually have some new twists, not least the option to have up to eight human players taking part at once! Vulcan can supply you with a multi-way joystick adaptor, or you can squeeze in on the keyboard. That's not to say you can't play it alone though.

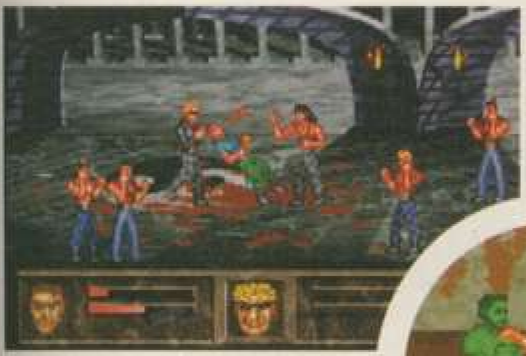
There are actually four main gameplay modes to choose from: Action, Deathmatch, Gang War and Practice. Action mode is your basic 'beat up the gang to move onto the next level' type of thing. Deathmatch allows you to select any of its 24 characters and then slog it out in a free for all with no computer controlled enemies.

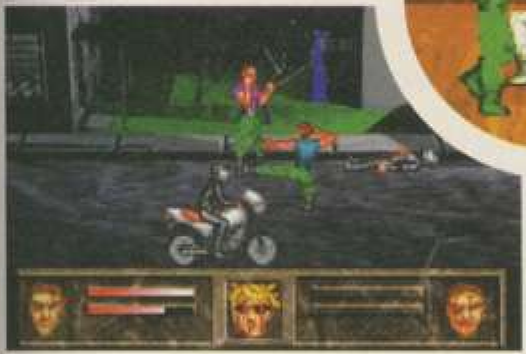
Gang War is like the Deathmatch, but you can team up with other human players to form two gangs of three, three of two or whatever you like.

The usual suspects

There's an impressive number of characters to choose from (not that it seems to make much difference who you control). In the interests of sexual equality, there's the usual sprinkling of female fighters too. Have you noticed how they all bear a spooky resemblance to those Valhalla chaps?







Two dimensional

Despite the earlier references to the likes of Tekken and co. you can see from the screen shots this is not really in the same league. While passers by have commented on its likeness to Streets of Rage, I can't help seeing the similarities with that seminal gang war beat 'em up Renegade.

Like Renegade, Strangers is a series of horizontally scrolling 'stages' in the form of various shifty locations around the aforementioned post-holocaust city. About two screens in width, they scroll with the players as they mince one way then the other. Although you can walk up and down the screen as well as side to side, it's well and truly two dimensional. That's to be expected of course, and no bad thing in itself. The trouble is, it's not just the graphics that are flat – the gameplay is too.

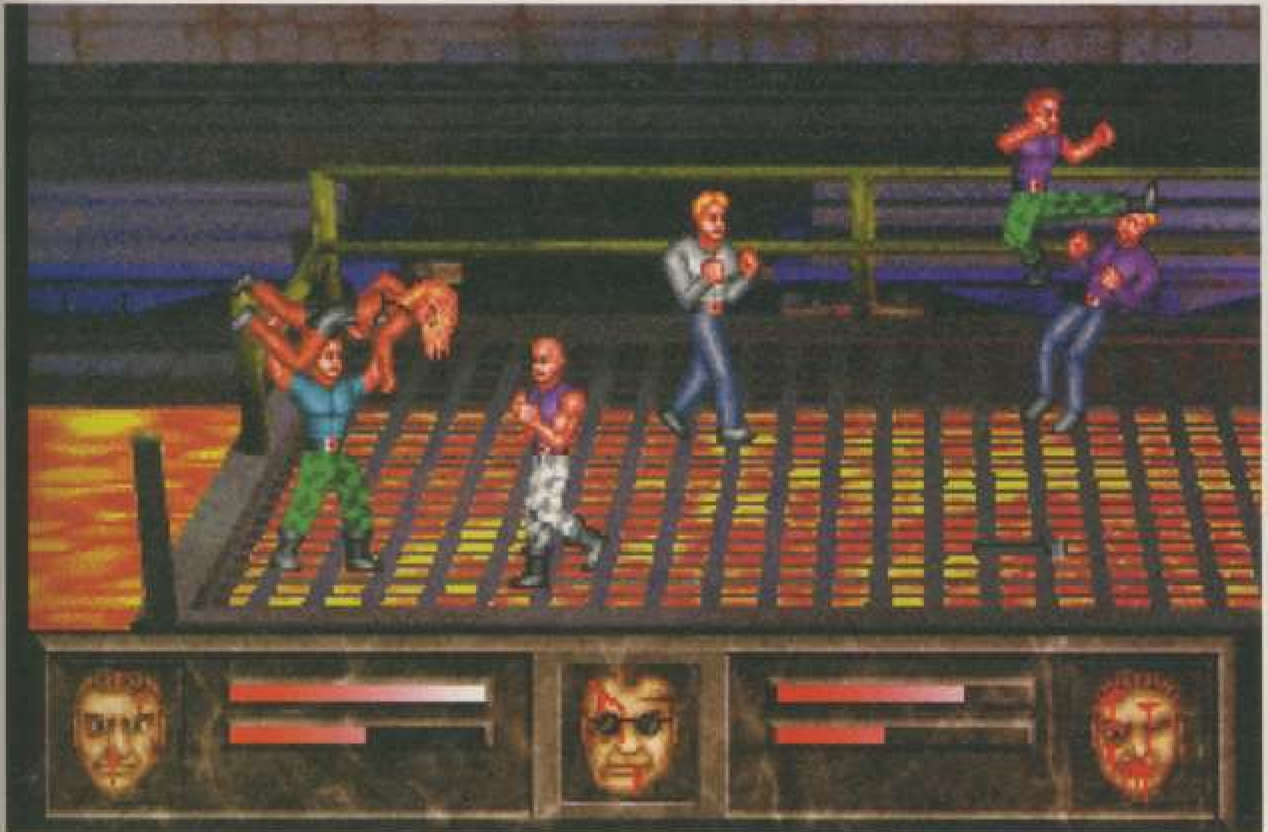
Before long the process of beating up your opponents becomes all too mundane. For a start, none of the moves are particularly exciting with your basic punches, kicks and the odd wrestling move. If the level boss notices you're close to death, he'll put you out of your misery with one of the 'fatalities' by shooting your arm off, then your head. If you don't want this level of gore there's a 'parent lock' password, used to enable or disable the fatalities. There's also weapons to pick up, but these offer little distraction from the punchbag monotony. Things improve as more human players join in the brawl, but still the shallow action does little to get the blood boiling.

Strip away the fancy rendered intro screens and sequences, and you're left with a game that's desperately trying to improve on its simplistic origins. The huge variety of characters, gameplay variations and options do make a difference. In fact they will be enough to save the game in the eyes of some. But let's be frank. The gameplay really is like something from a mid-80s time capsule. That could be acceptable in some genres but beat 'em ups have come a long way since then.

It's clear that big efforts have been made, but at the end of the day they are all in vain. If that same amount of effort had been put into developing the core gameplay I'm sure things would have been different. Bigger sprites, faster action, more intelligent enemies, tougher sound and professional looking graphics should have been at the top of the list. This is a shame, as the Amiga has never been well catered for when it comes to beat 'em ups. Anyone working on similar projects would do well to take a look at the classic IK+ and the Amiga conversion of Mortal Kombat to see how speed, graphics, sound and balanced gameplay can be combined to good effect. ■

Tony Horgan

▼ Weapons such as axes, maces and exploding barrels can make the job easier.



Introducing... a car chase

Whatever you think of the in-game graphics, the rendered 3D car chase intro sequence is pretty impressive. While it starts looking like a couple of toy cars running around a cardboard set, it soon gets more convincing with some dramatic camera-motion-blurred camera panning. It all ends in the satisfyingly predictable crash. What a shame it's got nothing to do with the game itself.

THE STRANGERS AGA

- Workbench version......3.0
- Number of disks..........CD
- RAM......................2Mb Chip
- Hard disk installable ...Yes

Graphics	67%
Sound	30%
Lastability	63%
Playability	60%

OVERALL

Lots of fancy dressing around a basic beat 'em up.

60%

Tips Central

CU Amiga's wacky arcade opus is just about ripe for some tips from Mark Forbes... whilst over on the other page the dungeon master Tony Gill does some more of his expert adventure solving for us.

Dune 2

Mrs T Goult from Hull has a useful tip for Dune 2 buffs.
First destroy the enemy construction yard or yards so they can't rebuild again once you have found them, and once you've practically destroyed everything leave either a spice storage silo or a radar outpost standing. If there's a lot of spice left you can collect the whole lot. All those credits will be yours and you gain a better score and rank, try it... it always works for me.

Xtreme Racing

On the first selection screen type the following:

`SHEEPY SHEEPY` – use a sheep to race with!

`TURBO NUTTER BASTARD` – mega fast car!

`IDKFA` – auto qualify for any race and access the 3 bonus tracks in single race mode.

Hints for 3 bonus tracks:

`Grasslands 1` – Go to the left of the two traffic islands, and go straight on (pick-up the turbo boost) until you can see a gap in the wall with a tree in it. Drive through the tree and reverse onto the course on the other side. Great short-cut. Useful too.

`Grasslands 2` – There is a road through the middle of the second island (the one before the main Start/Finish grid), as you have to go through a tree again!

`Road Circuit 2` – At approximately two thirds of the way along the very first long straight, you can actually drive through the tyre wall and then onto the second long straight!

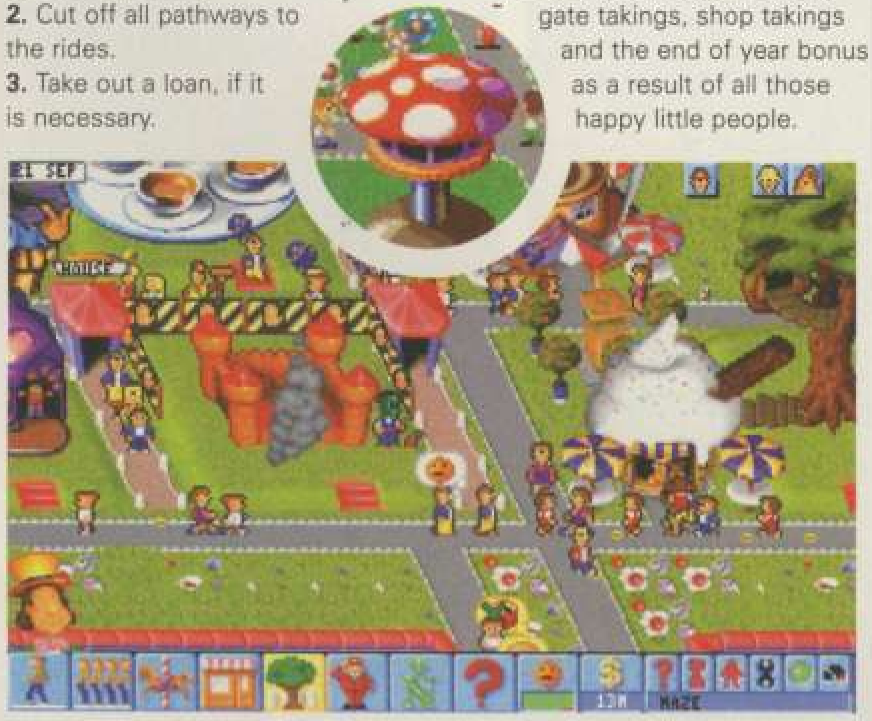
Theme Park

Malcolm Campbell came across a supreme tip for those who don't like cheating (sorry, I've never heard of such a thing!).
When you come across the situation of having very little money (that sounds familiar!), but you also have a fairly large park then try doing the following:

1. Close the park.
2. Cut off all pathways to the rides.
3. Take out a loan, if it is necessary.
4. Place shops around the entrance and put up the prices.
5. Open the park and wait.

Now people will flood in very happily, and will buy everything they can get their hands on! Meanwhile you can be preparing the rest of the park for re-opening.

You can easily get half a million in a couple of years from the gate takings, shop takings and the end of year bonus as a result of all those happy little people.



Colonisation

It's all gone strategy crazy with this month's tips! Colonisation is on of my favourite strategy games of all time, so I was pleased to get hold of this cunning cheat which virtually gives you a licence to print cash!
Here's what to do...
When starting a new colony name it 'Charlotte' (well doesn't everyone call their colonies by girl's names?). This allows you to see all the maps instantly, see other European ports, check on other countries statistics, and it also gives you $50,000!
When you access the other countries' European ports you can spend all their money! You can do this by either recruiting lots of people, or you can buy anything!
Or if you start again and rename your colony to something else you can start another colony called 'Charlotte' and get yourself another $50,000.
For example, if you start a colony and get $50,000 and then abandon the game several times, you will eventually start the game with $500,000!

Sim City 2000

Start a new game, in any year on the Hard level, type FUND until your cash reaches $60,000 (and reply yes to all queries).
Now you go to the budget menu and select bond repayments.
Click on repay bond and answer yes to repay bond at 3%.
You will now receive $50,000 every year!
Try typing in the following separate codes for some amusing effects: **`JOKE, VERS, CASS, PIRN, TOPS, GUZZ`**.

You need help

If you would like some help on any game – or you have some tips that you'd like to share with your fellow readers – then please write to us at Tips Central at the following address, remembering to mark your envelope Adventure or Arcade accordingly:

Tips Central,
CU Amiga Magazine,
37-39 Millharbour, Isle of Dogs,
London E14 9TZ.

Adventure helpline

Police Quest II

I have been playing Police Quest II for ages. I am completely stuck as I don't know how to; get into my locker or my Captain's locker, how and where to get my gun, how to gain access to the computer and what the passwords on the Captain's desk mean. Please give me some help as this is my favourite Sierra game.
Nicola.

I love it when people tell me about their favourite game, and then reveal that they haven't got a clue about it and have been stuck on screen one for years. You must have some pretty rotten other games.

The passwords are used for the computer of course, and this is what you do. Walk to computer, use computer, turn on computer. Access personnel file (password is pistachio). Look at Lloyd Pratt and Haines's files and note the information about their problems. Access the Homicide file (password is icecream). Access the Vice file (password is Miami).

You'll find the combination for your locker written on the back of a business card which is in the glove compartment of your car. The combination is 36-4-12. If you want a laugh, try kissing the picture inside your locker.

Simon the Sorcerer

I am well and truly stuck on Simon the Sorcerer. I have managed to get past the puddle outside the Tower of Doom, but what continues to really puzzle me is how will I get past the frog on the other side of the pond.

I have tried using the stone against him, but he keeps on grabbing me and then spitting me out.

Craig License, Alnwick.

Nasty things frogs. I had some frog legs for lunch last week, and they were so fresh they kept kicking the peas off my plate.

If you look in the water at the edge of the pond you can find a tadpole. I know it's there, so look very carefully, as it is easy to miss it. Once you have the tadpole you should talk to the frog and tell him to 'hoppit' or else the tadpole will get it!

Flight of the Amazon Queen

Simon the Sorcerer

Flight of the Amazon Queen

I need to know how to get past the snake in the Snake Room. I have the mummy's hand and the wrappings, but when I try to put them together the game keeps saying 'it's off'. I need to know how to turn it on.

Lee Fox, Reading.

The idea of putting the wrappings and the arm bone together is to form a torch which we can then light and scare the snake away. Obviously, until you light the torch it will be 'off'.

The trick is how to turn it on. For this you'll need to ignite the lighter using the flint, then use the lighter to light the torch. If you haven't got a flint, and it's not the sort of thing that most people carry around with them these days, then go back to the huge statue and walk into its mouth. Go, via the pulley room, to the room at the top. Use the pick axe to open a hole on the right, then use it again to break the stalactite on the right. It is here that you'll find the flint.

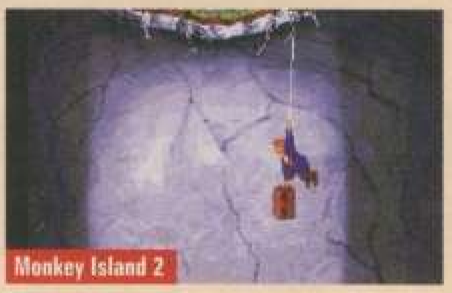
KGB

I have climbed onboard the Victor Masnev boat and tried to find anything that I can pick up, but there's nothing. I have also hidden in various places, but get caught every time. Can you please help before I go completely mad.

Super-Gran, Bradford.

You say there is nothing to pick up. Maybe you are just too choosey. I know that when I've been out on a Saturday night and decided that there really isn't anything worth picking up, a few pints of lager usually does the trick. I suggest you hide behind the fish crates and wait until the mechanic turns up and then leaves. Now you'll be able to climb down into the Radio Room. Here you will then be able to add all of the items to your inventory which is under the bed. Back on deck you must throw the bottle overboard (just left of the lifeboat). The mechanic will dive in after it, allowing you to get down into the engine compartment and hide in the closet.

Eventually the mechanic will return and fall fast asleep. Use the belt with the engine, then go back into hiding until 9:30. At this point head for the bow and wait behind the fish crates until midnight. Follow anyone who appears and goes to the Radio Shack, so that you can listen at the door of the Recreation Room. Return to your hiding place and stay until 5:00. When everyone has left you can walk to the stern at 6:45. At 7:30 you'll reach port.


Monkey Island 2

The Secret of Monkey Island

I have been playing this game for years, and I don't want to give up on it, but I really need some help. I have reached Monkey Island, but I haven't a clue what to do or where to go. Can you help?

Bob Harris, Norfolk.

When you arrive on the island you'll be nicely placed to pick up a banana. Walk to the fort on the NW of the island and pick up the rope and the spyglass. Push the cannon and pick up the cannon ball and gunpowder. Go to the river fork (east of island) and pick up the rock (which is really a flint). Now use the gunpowder on the dam and use the flint on the cannon ball.

Now you've filled the dry river bed and pond with water. Then go to the pond where there's a corpse you couldn't reach before. Pick up a piece of rope. With two pieces of rope you can to go to the crack near the landing beach and use them to climb to the bottom to find a set of oars. Walk to the piece of primitive art and pull it twice to move it. Climb to the cliff above and push a rock off the ledge. And now you'll be able to collect the bunch of bananas which you badly need.

Are you wanting to connect to the Internet?

1. Comprehensive Software

ALL YOU NEED TO CONNECT AND SURF THE INTERNET

NetConnect provides you will all you need to connect to the Internet - full TCP stack, web browser, mail, news, ftp, irc and telnet clients. You don't need anything else, no need to worry about additional software. The CD version even includes pre-configured MIME-types (for web browsing), datatypes, additional online documentation and more!

2. Commercially Licensed

NO SHAREWARE - FULLY LICENSED SOFTWARE

NetConnect is a suite if **commercially licensed** Internet software which means there is no need to register any of the core modules contained within the package - no time limitations, no hassle. All the software contained within NetConnect are arguably the best in their class. Net Connect controls the modules with a unique floating (or fixed) icon bar (which can be altered and new icons added to the bar) which means everything is just one click away!

NetConnect is, of course, fully supported and the modules contained within Net Connect will be supported by the authors with minor upgrades, enhancements or bug fixes.

3. After Sales Support

THE BEST FREE SUPPORT - GUARANTEED

We pride ourselves in offering superb after sales support to all our NetConnect/Internet users. We guarantee you will not get better **free** Internet related support from any other rival company. Support via telephone (Mon-Fri 10am-6pm), e-mail, mailing list (general NetConnect forum) and the web site (www.amigaworld.com/netconnect).

Our aim is to help users with their Internet connection **after** they have purchased Net Connect and we understand that the Internet can be a daunting experience for the beginner.

Issue 2 of our Internet magazine 'Internet Informer' should be available within September. This is a quarterly magazine with the latest information about the Internet and your Amiga - NetConnect users receive this magazine free of charge!

STFax Professional [available September] £29.95

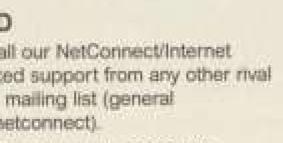
STFax Professional is new commercial fax program for the Amiga containing the sort of advanced fax features you would find within commercial PC fax software. STFax has been in the shareware for the last few months, and the brand new commercial "professional" version offers even more advanced features plus some voice control for voice modems.

- Support for all modem classes (1, 2, 2.0)
- Voice control - use your Amiga as a digital answer machine etc!
- Phonebook (store all your favourite fax numbers)
- Scheduler (store fax messages to be sent at specified times)
- Reports
- ARexx port
- Datatypes support for image conversion
- Printer driver to redirect all print-outs to a fax file (print from Wordworth, Pagestream etc!)
- Viewer for viewing outgoing/incoming fax messages
- Plus many more features

High Speed Serial Cards from £49.95

The **Hypercom** range of high-speed serial cards offer your Amiga the fastest connection to the Internet, for comms and for fax transfers. Available for the Amiga 1200 (these serial cards are placed within a previously unused expansion port - leaving the PCMCIA port and trapdoor free!) and zorro-II/III based machines (zorro version suitable for A3000/4000 or a A1200 tower). High-speed buffered parallel option available. These cards are currently the fastest serial cards available for the Amiga, making the Internet work faster for you!

Model	Machine	Specifications	Price
Hypercom1	A1200	1 x 460,800bps highspeed buffered serial port	£49.95
Hypercom3	A1200	2 x 460,800bps highspeed buffered serial ports 1 x 500K bytes/sec buffered parallel port	£89.95
Hypercom3Z	Zorro-II	2 x 460,800bps highspeed buffered serial ports 1 x 500K bytes/sec buffered parallel port	£89.95



Hypercom 3

Various Modem Pack Options

Various money saving packs are available. These are all based on either the 33.6k or 56k modem plus a a collection of extras. Call us for other pack options if you have your own pack idea!

CODE	PACK CONTENTS	PRICES £
PK01	33.6 Modem & STFax	£ 89.95
PK02	33.6 Modem & NetConnect	£109.95
PK03	33.6 Modem & NetConnect & STFax	£119.95
PK04	33.6 Modem & NetConnect & Hypercom1 & STFax	£149.95
PK05	33.6 Modem & NetConnect & Hypercom3Z & STFax	£159.95

ADD £25 for a 56k Modem (instead of the 33.6k model)

- All packs come with one month free connection to a major Internet Service Provider
- Other options may be available - call
- Choose between the CD or Floppy disk version of NetConnect with your modem pack
- STFax Professional will be despatched on release

NET CONNECT

NetConnect v2

NetConnect v2 is even easier to connect to the Internet! Launch the new Wizard GUI, choose your modem, enter a few user details and let the Wizard do all the rest for you! Simple, with version 2 you don't even need to worry about the provider - everything is automatic, everything is point and click! **Amiga Format** concluded about **NetConnect v1** (June 97 issue): "Almost the perfect package for the Amiga Internet user", "If you need to get online, this is the easiest way to do it" and "It's good value for money too - especially the bundle including the 33.6K modem." We have listened to our NetConnect v1 users, noted their comments and added some other new features. NetConnect v2 is available on CD-rom and floppy disk. **Specifications include:**

- **New AmiTCP** - NetConnect v2 users will be the first people to use a version of the new AmiTCP! We have added a number of changes to this new version - the main additions are the new Wizard, MUI based dialler and 'events' control.
- **AmiTCP Wizard** - makes configuring your ISP a doddle. Choose your modem, enter some user details and then the rest of the process is completely automatic! This is true Windows95™ style connectivity! See the two example pictures - point and click Internet configuration!
- **New programs** - NetInfo and X-Arc (X-Arc is a brand new WinZIP™ style archive management tool. Downloads lha/lzx files from Voyager/AmFTP/Microdot-II, auto-extracts them into X-Arc's GUI and allows you to control the files.
- **Programs are now keyfile based** (can be used with any TCP stack - Miami etc)
- **Extras pre-configured**: MIME types (CD only), datatypes (CD Only), online help files etc
- **Updated, latest versions of the modules** (Voyager, Microdot-II, AmIRC, AmFTP etc)
- **Printed installation/introduction guide** - install NetConnect quickly and easily
- **Printed manual** - using the Internet and NetConnect
- **Plus many more smaller changes and additions**

AMITCP v4.6 DIALUP
AmiTCP is a new full TCP stack, enhanced and developed by us and NSDi with full GUI control!

VOYAGER-NG
Voyager Next Generation is already powerful with javascript, frames, tables, SSL (https:) etc!

MICRODOT-II
A superb and brand new commercial email and news client, said to be the best for the Amiga!

AMFTP
The industry standard FTP client and the number one FTP program on the Amiga.

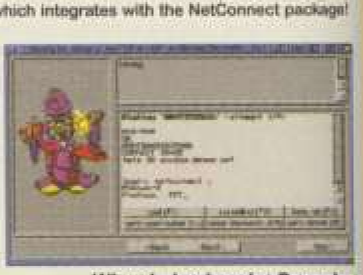
AMIRC
Again, the industry standard Amiga IRC client - said to be better that its PC and Mac rivals!

AMTELNET
Use AmTelnet to maintain your web site, connect to external computers, play online games!

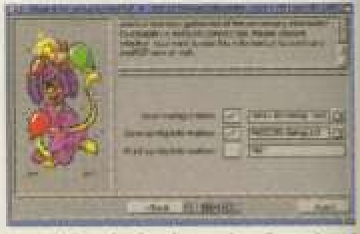
NET INFO
NetInfo is a new program by Oliver Wagner to search the net - traceroute, ping, services etc.

AMTERM
AmTerm is a comms program - connect to a BBS, send files to your friends Amiga/PC/Mac!

X-ARC
Brand new DOpus like archive management tool which integrates with the NetConnect package!



Wizard - Loginscript Recorder



Wizard - Configuration Completed

NetConnect v2 CD	[contains many extras: datatypes, MIME types (for www browsing) and much more]	£52.95
NetConnect v2 Floppy Disks	[only contains the core programs & online help documents]	£54.95
NetConnect v2 Upgrade from v1/v1.1	[registered NetConnect v1/v1.1 users only]	£Call!

Latest Technology Modems

K56Flex modems are here! Download software and web pages upto __twice__ the speed of a 28.8 modem. 56k modems will operate at 33.6K speeds for uploading but you can cut your phone bills drastically when using the 56K technology! Isn't it about time you upgraded that 14.4 or 28.8 modem? For further information about the new K56Flex (Rockwell developed) technology contact us!

We only supply quality __branded__ modems (Dynalink UK Ltd), which may cost slightly more than their unbranded competitors, but they ship with a 5 year warranty, the knowledge that a UK company offers support/information and you are buying a modem with quality (Rockwell based) components.

K56Flex modems need to connect to another K56Flex modem in order to use 56K technology (make sure your provider supports K56Flex technology). Call for further technical details.

- Quality __branded__ Dynalink modem (supported by Dynalink UK Ltd)
- 33600 bps DATA/FAX/VOICE modem - true v34. Throughput to 115,200 BPS via V42 bis data compression
- Group 1, 2 & 3 send/receive FAX (14.4)
- Voice Commands - DSVD upgradeable (by software)
- Auto Answer
- Full Duplex Speaker
- Call Discrimination
- Fax on demand
- Simultaneous voice and data (S.V.D.)
- Message playback via sound card / speaker or headset
- Auto mode detection allows modem to connect with a modem that is configured for differing connection modes
- Extended AT (Hayes compatible) command set
- Upgradable ROM chip (safeguarding against future specifications)
- BT and CE Approved
- Amiga 25pin __and__ Surf Squirrel/PC 9pin serial cable included
- With Headphones and Microphone
- 5 year warranty - also undergone rigorous Amiga tests

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POSTAGE/DELIVERY

CD's	- 50p per CD for UK delivery - £1 per CD for EU delivery - £2 per CD World delivery
Modem	- £3 for 2-3 day delivery - £5 for next day delivery - £15 for Saturday delivery

Make cheques/P.O.'s payable to Active Software and send to the address listed opposite. We can accept credit or debit card orders. For any additional information call us ASAP!

WANT MORE INFORMATION?

We provide an information pack covering NetConnect and the modules (Voyager, MD-2 etc), the modems we offer, connectivity discounts and a set of frequentely asked questions and answers. Ask us to send you an info pack!

You can also access the NetConnect homepage for additional info, latest news and to download a time-limited demo version of the software:
http://amigaworld.com/netconnect

VAPORWARE PRICES

If you are not interested in buying NetConnect, you can still buy Vaporware Products individually:

Voyager Next Generation	£20.00
Microdot-II	£18.00
AmIRC	£18.00
AmFTP	£18.00
AmTalk	£12.00
AmTelnet + AmTerm Package Deal	£18.00

- 5% Discount when 2-4 Vapor products are bought, 10% Discount for 5+
- Note that the Vaporware products are e-mail only but can be sent on floppy for a surcharge of £2.00 per product.
- *Other Vapor titles available - http://www.vapor.com for further information*

Tech scene

Ho hum, another month another collection of new products to pump through the CU Amiga labs. If only the Amiga market would settle down, we'd get some peace.

50 Fusion Mac Emulator

Jim Drew's latest commercial Macintosh emulator gets a thorough examination by Mat Bettinson. Is Fusion a ShapeShifter beater?

52 Eyetech E-Z Tower

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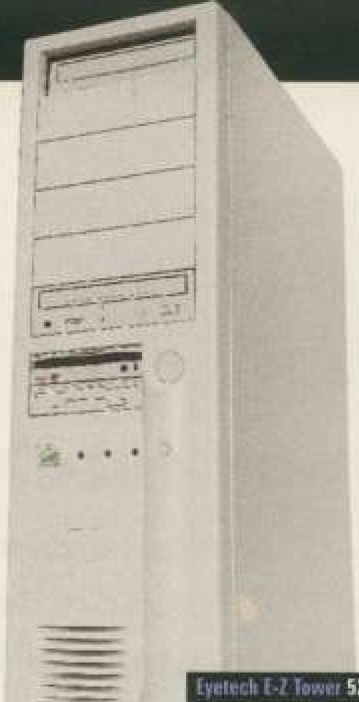
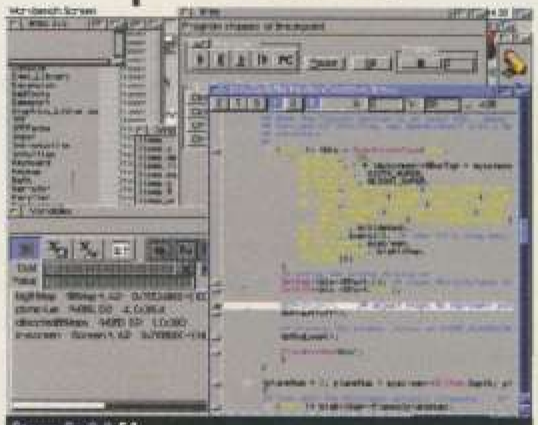


Eyetech E-Z Tower 52



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Fusion

■ £49.99 ■ Developer: Microcode Solutions ■ Supplier: Blittersoft © 01908 261466 http://www.blittersoft.com

Fusion is the latest commercial Macintosh emulator from Jim Drew's Microcode Solutions stable. Mat Bettinson asks if it shapes up against ShapeShifter.

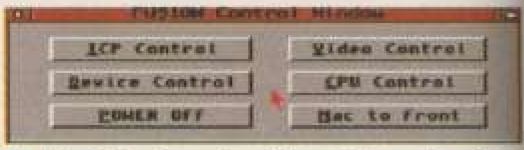
Macintosh emulation has always been a complex and difficult endeavor. However when you need to run some of the big industry standard applications, Mac emulation is just the shot. Actual Macintosh-like performance is easily possible unlike PC emulation which is hardly feasible to do anything serious with. If you've a serious up spec Amiga, it's also good for playing some of the big name games on the Mac that may never make it to the Amiga.

Fusion vs ShapeShifter

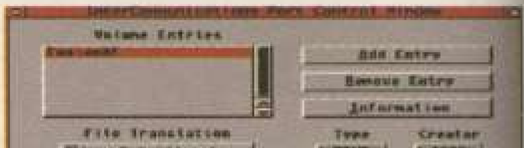
Whatever the reason for emulating a Macintosh, Christian Bauer's ShapeShifter is the Amiga's defacto standard Macintosh emulator. ShapeShifter hasn't been developed a great deal in recent times and there remains a number of features and improvements that can be made. Fusion claims to be just this, a ShapeShifter beater.

The big improvements include virtual memory support, direct display drivers and all round performance gains. Fusion is a 100% commercial package so you won't have the ability to try it out unlike ShapeShifter's shareware policy. Supplied on a single floppy disk, the installer copies everything needed to the hard drive and installs the 'rsrvwarm' command to the start-up-sequence. This was the start of my problems, rsrvwarm caused my Micronik A1200 tower with a Blizzard 1230 to spasm into a constant reset loop.

I booted with no startup-sequence, removed it and started to read the documentation provided in Amiga Guide form only. It was quickly apparent that there was no documentation on rsrvwarm or the other file provided called rsrvcold. Some form of patch is always required with Macintosh emulation to free the bottom area of memory. The SS PrepareEmul worked fine for SS but Fusion refused to acknowledge the patch. Through certain degrees of experimentation I found that rsrvcold needed to be in the startup-sequence instead.



▲ When Fusion is running, this control panel is active.



▲ Here's the ICP settings which allows us to mount any Mac volume on the Amiga.

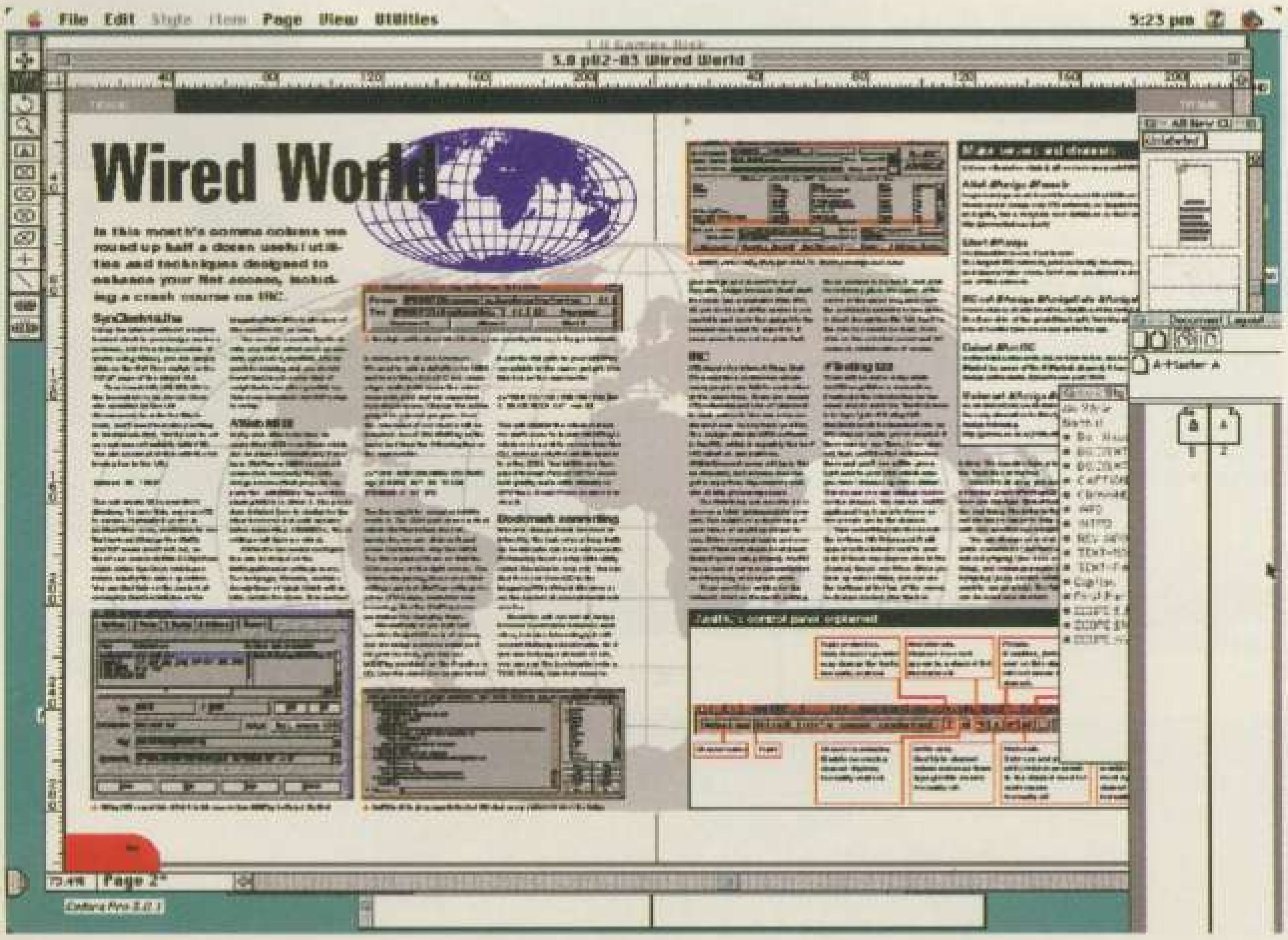
Fusion's GUI sets up all aspects of the emulation and there's quite a bit of it too. The first page lets you select the memory used for the emulation. Every type of memory is listed verbosely, impressive but the free and used memory gauges often lost the plot and flew up and down with a couple of mouse clicks. On the same page is the memory options and here one can activate the really groovey function of Fusion, the MMU options, to allow Virtual memory on the Mac side. Of course one will need a CPU with an MMU to take advantage of this aspect. A 68020 or 68EC030 will not do.

Video drivers

On the video page Fusion displays a list of drivers; clicking on one brings it to the selected listview, clicking on it on the selected side activates the options. Fusion uses this silly GUI method on a few pages but it's possible to get through. I'd be happier with a more standard GUI approach though and some online help!

The display drivers are excellent, there's native Amiga drivers, CyberGraphX, A1200 Graffiti and Picasso96, all with refresh mode drivers and direct to the display drivers called 'XL'. The latter is very welcome as this offers great speed boost over ShapeShifter. The implementation of QuickDraw acceleration translation through to the RTG systems also aids display speed greatly.

Unlike ShapeShifter which sets the screenmode to start the emulation in, Fusion actually takes the display modes available from the display driver in question and adds this to the Mac side. The Macintosh standard monitor control panel will then allow changing of screenmodes on the fly rather than a reboot. Another powerful and welcome feature. By plugging in a high density floppy disk, I managed to start Fusion the 'official' way. This was done by defining a hard file (more later) and booting the real MacOS System 7.5 floppies: first the DiskTools floppy to format my hard file, then the 7.5 installer for a painstakingly slow process of installing System 7.5. After the entire installation procedure had finished, it bombed out with the generic Macintosh



▼ Here is Quark Xpress, used to design CU Amiga, running on Fusion.

Totally Undescriptive Error ™. After several more attempts choosing progressively less to install, it never worked and I gave up.

The obvious question about Fusion is "How/can I use ShapeShifter partitions and/or hard files with Fusion". The answer is "Yes" but you wouldn't know it from the documentation which fails to mention a lot but, most unforgivably, fails to mention using ShapeShifter legacies at all. After a call to Blittersoft, it transpires that there is a roundabout way of doing this. For a hard file, one must create a Fusion hard file of the same size as the ShapeShifter hard file. Then delete the Fusion hard file and rename your SS hardfile to that of Fusion's.

Why on earth can't you just select an existing hard file? The authors claim is that it's far better to start from scratch, but after a lot of experimenting, it's clear that Fusion is much more fussy when it comes to installing MacOS.

Mounting SS partitions

Using a ShapeShifter partition is possible in a thankfully less painful way.

The original AmigaDOS mountlist entry for the partition needs to be mounted and then Fusion can access it from its devices page – the same process for creating a new Fusion Mac partition. It would appear that the partition must remain mounted unlike SS where it is typical to dismount the partition from the hard drives RDB settings.

Fusion has standard support for ports, the Mac Port A and Port B can be pointed to the serial or parallel devices. A quick test verified that this worked fine. Unfortunately the network driver didn't function at all. After adding the ariadne.device SANA2 driver, the Mac failed to recognise the presence of Ethernet at all and disabled the EtherTalk networking. This was a major blow for use of Fusion in the office, Blittersoft and the authors had no suggestion on why it should not work.

ROM image wise, Fusion recommends standard 512K ROMs even if using an 040. Apparently Jim Drew has performed some miracles of patching the ROMs to work on 040 and 060s which work better than Apple's own patched 1Mb ROMs. Like Shapeshifter a utility is provided to dump the ROM image off a real Macintosh, I used the the same 1Mb Quadra 800 ROM image used for ShapeShifter with no problems.

Fusion has support for the AHI audio retarg system which means that real 16-bit audio can be output from the Mac side directly to any supported AHI sound card or even the Amiga's native sound via an AHI 14-bit driver. This is excellent and future proof audio support.

SCSI strange approach

Unlike ShapeShifter, Fusion does strange things with supporting CD-ROMs and standard SCSI. It will allow a CD-ROM to be selected by device driver and unit number but for proper native Mac SCSI access to devices, one must use the Emplant card with the SCSI interface or create an AmigaDOS mountlist for a device. Blittersoft informed us that proper Amiga SCSI support is coming in Fusion 1.2. I certainly couldn't get a Zip drive up and running but it took seconds with ShapeShifter.

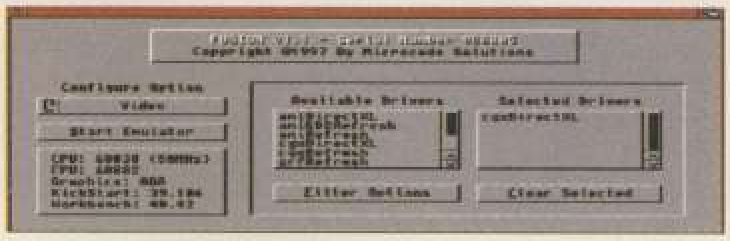
Fusion has superb input handling for the mouse and keyboard. There's a choice of using low level hardware mouse handling or software handling which enables the use of non standard controlling devices such as graphics tablets and such forth. There's also basic support for the US keyboard and the International 'ISO' keyboard.

There's the ability to set the Mac being emulated via a cycle gadget. This doesn't mean anything other than setting an ID for MacOS but some programs will depend on it from bitter experience of ShapeShifter's fixed Mac II emulation. In all, the Fusion front end GUI is functional but a little illogical. Fusion can also be launched from the command line. Interestingly whenever Fusion is run, it says 'Type: Fusion -h for usage instructions' but the -h (for help) mode does nothing. It's a great shame that the front end GUI doesn't have help buttons which pull up the AmigaGuide to the relevant locations or at any button to bring up the AmigaGuide documentation at all.

AMIGA
MAGAZINE
T.F.X.
The apex of military flight simulation
Totally Exclusive!
T.F.X. On This CD!
Portable Amiga
Mac Emulation
ISDN Internet

▲ This kind of intense Mac emulation surely benefits from Fusion's performance increase and virtual memory.

One cool Fusion feature is that when flicking back to Workbench, there's a window there that controls the Fusion emulation. The greatest function here must surely be the ICQ handler. This allows any volume on the Mac side to be mounted on the Amiga. It's something like the Mac handler on ShapeShifter but via a GUI and without having to mess with tooltypes and mounting orders to select a drive. It's a massive improvement on the ShapeShifter method. Fusion also allows clipboard movement of text from Amiga to Mac and vice versa.



▲ The main Fusion control GUI. Seen here is the page with the video drivers listed.

Emulation control panel

It's possible to force kill the emulation with a button on this little emulation control panel but doing so is a bad plan. In fact I found shutting down the emulation at all was ill advised unless you intend to reboot. Otherwise a variety of bad behavior from hangs, Fusion task helds, crashes and so on resulted. The author's blame using of a ShapeShifter hardfile but this behaviour was evident even on a fresh Fusion hardfile.

Concluding, I found Fusion a very difficult product to review. Macintosh emulation can be relatively easy on one setup and then not at all on another. This doesn't explain the collection of difficulties experienced here. Much of my problems really could have been addressed with much improved documentation not to mention online help for the GUI. The lack of network support functioning and crashes on quitting are just plain bugs that need to be fixed. Luckily it seems that some of these aspects are going to be addressed in version 1.2 including the essential Amiga SCSI support.

While Fusion is certainly more developed than ShapeShifter with impressive features and performance gains, it still seems an unfinished product. If these criticisms were addressed there's nothing holding Fusion back from sweeping up the Mac emulation throne. I recommend Fusion if you're willing to work through the hassles and certainly if Mac gaming is on your mind. The raw video performance makes 3D games such as Duke Nukem 3D far more impressive. However, for the Mac emulation newbie, I can't give it the resounding thumbs up. First try using ShapeShifter before getting your wallet out, it's much easier to get up and running. Fusion is a good step forwards but it needs some more polish yet. ■

Mat Bettinson

FUSION

Developer: Microcode Solutions

System Requirements: 020, lots of memory, hard drive, Mac ROM and system disks. RTG display recommended.

Ease of use..........62%
The documentation and GUI need serious work!

Performance..........89%
Superb features list and extremely fast performance.

Value for money..........82%
50 quid for a Mac ain't bad. Then again, you'll need MacOS

OVERALL

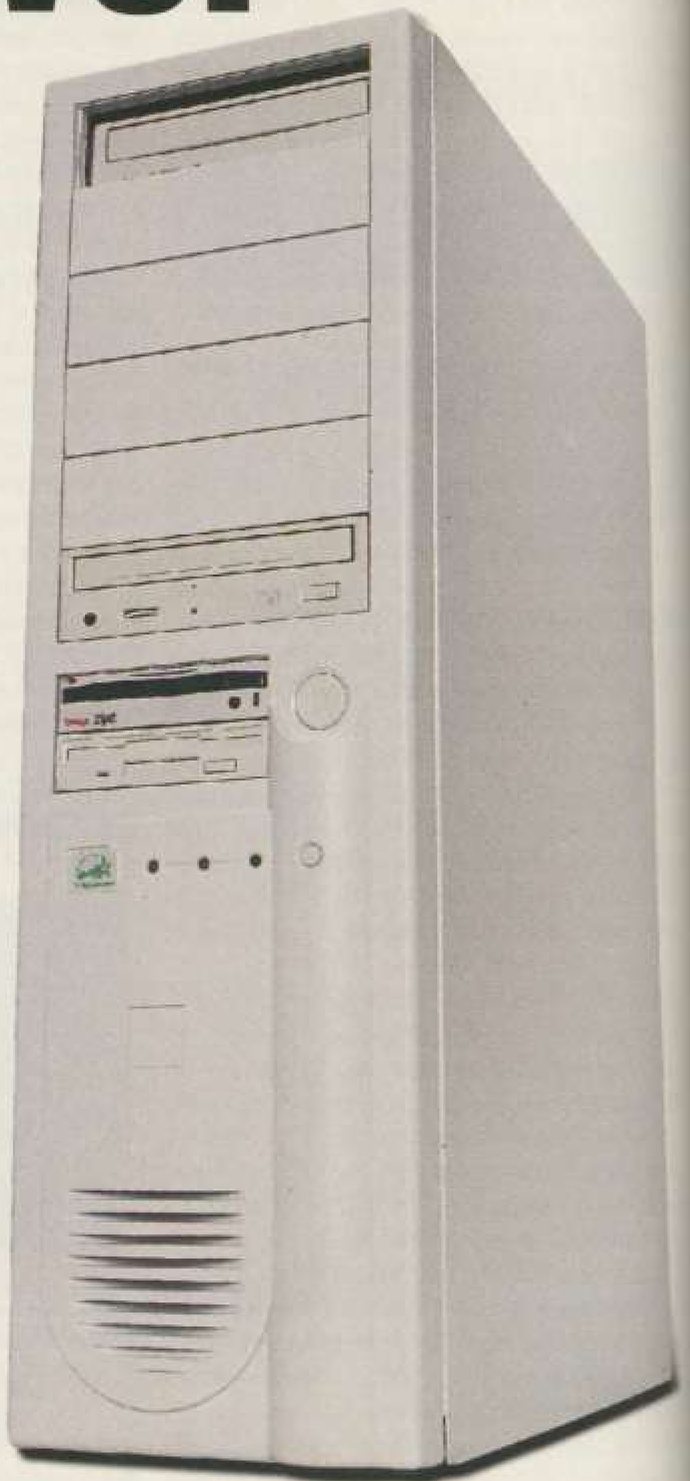
Fast, powerful but flawed Mac emulation.

78%

Mk II EZ-Tower

■ Price: £119.95 ■ Supplier: Eyetech Group Ltd
✆ 01642 713 185 http//www.eyetech.co.uk/~eyetech

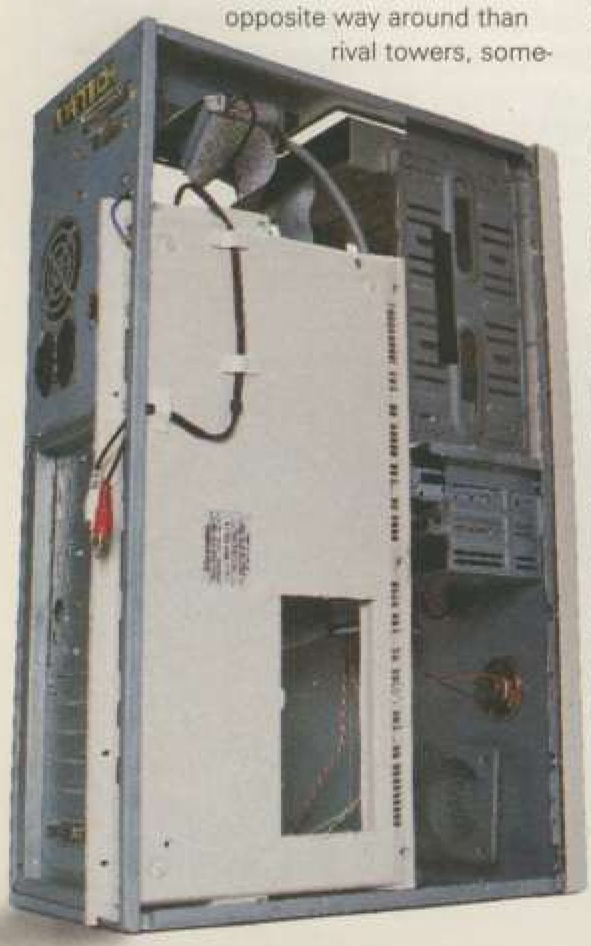
Eyetech hits the scene with an offering which makes the word 'tower' more verb than noun... this beast is vast. What's more, you barely need to take your Amiga apart.



The EZ-Tower is a rather interesting alternative to the ICS and Micronik towers reviewed last month. It is designed with the home build market very much in mind, and is aimed squarely at the kind of people who are much more at home with a hacksaw and hand drill than they are with a soldering iron.

The biggest difference between this tower unit and the ones we have looked at previously is that the motherboard doesn't come out of the case. You remove the top of your A1200 and the keyboard, but the motherboard, metal shield, and the bottom of the plastic case all stay together. There is a long slot in the back of the tower into which the A1200 fits, after a couple of small locating/holding notches are cut into it, and a small metal retaining plate is screwed over the top to hold the A1200 in place. The computer remains loose at the front, but a convenient strut towards the front of the case lets you fasten it with cable ties.

An interesting departure from the norm sees the motherboard being mounted the opposite way around than rival towers, something only possible because of the unique nature of the particular tower used.



This is advantageous to PCMCIA users as it means they don't have to buy an expensive and fragile angle converter. What's more the tower has a cut out at the back designed to take a cable which converts the inconvenient 50 way Centronics interface on a Squirrel to a more common 25 pin D type connector plate for the back, and a 50 way IDC connector for internal SCSI devices. If you have an external SCSI CD-ROM drive, you can move the drive mechanism into your tower, and you should find a cable of this type in the old external case. Alternatively Eyetech can supply them for just under £20. The down side of the unusual alignment is twofold.

Firstly, accelerator cards are left dangling by the slot. The manual does suggest that you might want to wedge your accelerator in place. We strongly urge anyone to follow this advice. The second downside is that the motherboard faces into the case, making further modifications a bit of a pain. If you want to forget about the insides once you've constructed it, this is no problem, but if you are a tinkerer it will irritate.

A lot of thought

A similar amount of thought has gone into the design of the rest of the tower. A very nice touch is the CDDA phono output option. Rather than just sticking a couple of phono jacks on the back and letting people deal with having two sound outputs for themselves, Eyetech supply a simple passive mixer stage to mix the CD audio and Amiga audio outputs.

Eyetech supply the EZ-Key keyboard adaptor, the easiest unit to install and about par for the course for reliability. Alternatives are the Ateo interface and the Micronik adaptor. You're likely to want an extension to the IDE interface too. Eyetech sell an expensive but good buffered device which gives you two channels, allowing up to four IDE devices to be connected.

The solution to the floppy mounting problem that Eyetech offer is the EZ-DF0, an interface which allows standard PC drives to be connected as a standard DD DFO. They are currently listing this at £44.95 including the drive, which seems like an expensive way to go. We feel that with both the ICS and Micronik towers allowing you to retain your old floppy, this is a point against. However, Eyetech have assured us that they

Zorro Solutions?

The Micronik busboard which we looked at in last month's reviews of the Micronik and ICS towers cannot be used in the Eyetech tower – the 'upside-down' mounting makes this impossible. Instead Eyetech use the RBM busboard as used in the Eagle tower systems. Eyetech did not supply the EZ-tower with one, so we have not had a chance to try one out. In operation there should be little difference between them, and Eyetech tell us that the old reliability problems the RBM board suffered in the past have been solved.

will be supplying a face plate and cable for connecting your internal drive as standard by the time you are reading this.

A clever touch is the connection of the LEDs to the LED header on the motherboard. A small row of header pins is connected alongside it to provide earth lines for the LEDs, the current controlling resistance supplied via an inline resistor module which ties the header pins to earth. The LED headers just plug straight on top of this. It is a pity that there is not a solution for the reset key, however. The Micronik tower relies on the reset line on the Zorro busboard, and the ICS uses the Ateo keyboard interface which has a built in reset line.

Assembly is designed to be easy. Oddly enough we didn't find this tower to be any easier than the others to build, although the difficulties are in different areas. This is certainly the way to go if the notion of stripping your Amiga 1200 to the bare bones makes you break out into a sweat. Assembling this unit feels more like constructing an Ikea cupboard than embarking on some serious electronics. In its final form it runs very nicely, and has more drive bays than you are ever likely to use.

Multiple choice Zorro

With the Micronik board being joined by a bigger brother, there are now three options to look at in the busboard stakes.

The Micronik Z2-i is the one we looked at last month, and fits in both the Micronik and ICS towers. It comes with five Zorro 2 slots, two ISA slots, two PCI slots (for use with the Micronik PC motherboard only) and has a video slot option. The Z3-i is the same but with the addition of a SCSI-2 interface and an A4000 CPU slot which allows the board to accept top of the line A4000 accelerator cards such as the Cyberstorm 060.

The Zorro 2 slots have also been uprated to the Zorro 3 standard. The busboard from RBM, for which this tower has been designed has seven Zorro 2 slots and five ISA slots. Blittersoft (01908 261477) supply the Micronik units at £149.95 for the Z2-i and £319.95 for the Z3-i. Eyetech sell the RBM unit for their own towers at £179.99. An interesting development for the near future is the single slot Zorro card from Eyetech, which should work in any tower. Produced in response to the clear demand for graphics cards above all else, Eyetech are hoping to be able to sell the card at under £100, or for £250 including a graphics card.

Contact Addresses

Eyetech tower, RBM busboard:
Eyetech Group +44 (0)1642 713185

ICS tower:
Intrinsic Computers +44 (0)1474 335294

Micronik tower, Micronik busboard:
Blittersoft +44 (0)1908 261466

The ultimate tower comparison chart

	Eyetech	Micronik Infinitiv	ICS Amigo
Ease of construction	8/10	9/10	8/10
Sturdiness	7/10	3/10	8/10
Keyboard interface	7/10	7/10	7/10
Floppy drive solution	6/10	6/10	7/10
Accessibility	6/10	8/10	8/10
Zorro use	?	4/10	7/10
Internal space	10/10	4/10	8/10
CDDA out	√[2]	x[1]	√
Dual motherboards	√	√[3]	x
Reset switch connected	x	√[4]	√
PCMCIA access	√	x[1]	x[1]
Number of bays: floppy	2	2	2
3.5"	3	0[5]	3
5.25"	6	2[6]	3
Busboard type	RBM	Micronik	Micronik[7]
Cost: Bare tower & PSU	£119.95	n/a	£99.95
Tower, no PSU, Kbd i/face	n/a	£119.95	n/a
Tower, PSU, Kbd i/face- & floppy cables	£159.90	£159.95	£140.85[8]

Busboard costs: Micronik £149.95 or £319.95 RBM £179.99

1) Optional extra. 2) Optional extra, includes Amiga audio out mixing. 3) Only with custom Pentium board. 4) Only with busboard fitted. 5) Extra bays £11.95. 6) Extra bays £29.95. 7) ICS do not supply the busboard, purchasers will have to buy their own from Blittersoft or their local Micronik supplier. 8) Or £199.95 with free keyboard, CDDA out, and full assembly.

An intriguing aspect of the design is that the back to front insertion of the motherboard means that a standard PC AT motherboard can be inserted into the case in the normal way at the same time as the Amiga. The card slots on the PC motherboard will deny the Amiga space for Zorros, but there should still be room to use the single Zorro. As a more exciting alternative, we found there was plenty of space to stick a PCMCIA Ethernet adaptor into the A1200 and Ethernet the two machines together for the ultimate Siamese set up. Retargeting the Amiga to the PC eliminates much of the need for Zorro cards anyway – see page 52 of last month's issue for an idea of what this could do.

▶ A slot in the back allows access to the Amiga's ports.

Overall the Eyetech tower offers clever solutions, with a velcro easifit mentality. The final tower is nice to use, if a little messy internally. It's a bit of a monster, more of an under-the-desk than next-to-the monitor tower. It has a lot going for it, but there are swings and roundabouts. It's certainly the easiest construction option for the less experienced builder, but we're not going to tell anyone what to buy. We liked it, and if you look at the big table you can see exactly how it compares to its main competitors. ■

Andrew Korn

MK II EZ-TOWER
Developer: Eyetech Group

System Requirements:
An A1200 and a few simple hand tools.

Ease of use 91%
This is DIY at its most user-friendly. Amiga surgery for the owner who faints at the sight of silicon.

Performance 86%
Loads of bays, decent build quality and plenty of extras, however we haven't tried the Zorro option so beware.

Value for money 91%
A lot of tower for the money, plenty of widgets and good technical support from Eyetech.

OVERALL
A very nice piece of kit, particularly for the not so techie.
89%

StormC v2.0

■ Price: £229.95 (commercial license) £110.95 (non-commercial license)
■ Developer: Haage & Partner ■ Supplier: Blittersoft © 01908 261466

Looks like Haage and Partner will succeed in propelling the Amiga's development tools into the present day... with just a little help.

Even those who are only remotely interested in programming must have heard about this new kid on the block. StormC seemed to appear from nowhere and, from the very beginning, it has set about stealing SAS/C's crown. Now it's reached version 2.0 and the jury has been reassembled to see whether it's got what it takes.

Project Manager

StormC is a C and C++ compiler, but it's not like your average Amiga C compiler. No, it's got this Project Manager thing you see and this, above all, is its unique selling point.

Recently, the Amiga has been left behind in its development tools. For instance, the Mac was blessed with Metrowerks' wonderful CodeWarrior IDE for a while. So it's time someone kicked the Amiga into the nineties and borrowed the decent ideas from other platforms. This is exactly what StormC has done. In fact, the Project Manager is similar to that found in CodeWarrior (especially the way project sections are represented).

This Project Manager takes the hassle out of creating Makefiles, working out dependencies between files, and invoking the compiler and linker with the correct options. It's all done visually (by drag and drop even). All options and other customisations can be set via a nice GUI. No more messing with command line tools and remembering a million different switches (although it doesn't prevent you doing this, if you're masochistic).

Everything is really simple and easy which makes it ideal for beginners, but there's still the complexity of writing some code (you'll have to cope with that by yourself!). Even seasoned programmers will find this aspect a real boon: Imagine the development time that can be saved. Old hacks can also work their own magic using the Project Manager thanks to the new ARexx Makescripts (one of the supplied examples shows how to integrate compiling Locale catalog files).

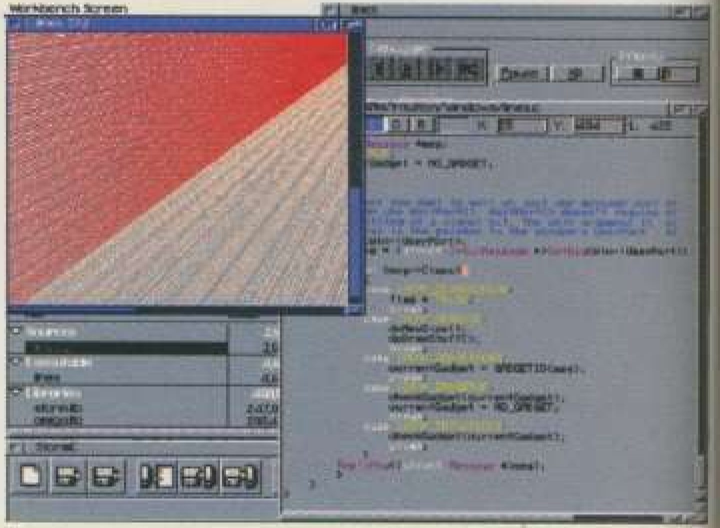
Text Editor

StormC is a complete IDE (integrated development environment). The most important component is the program you use to create your sources: The Text Editor. StormC's own editor is great. It's got syntax highlighting, is easy to use and is even integrated with the source level debugger.

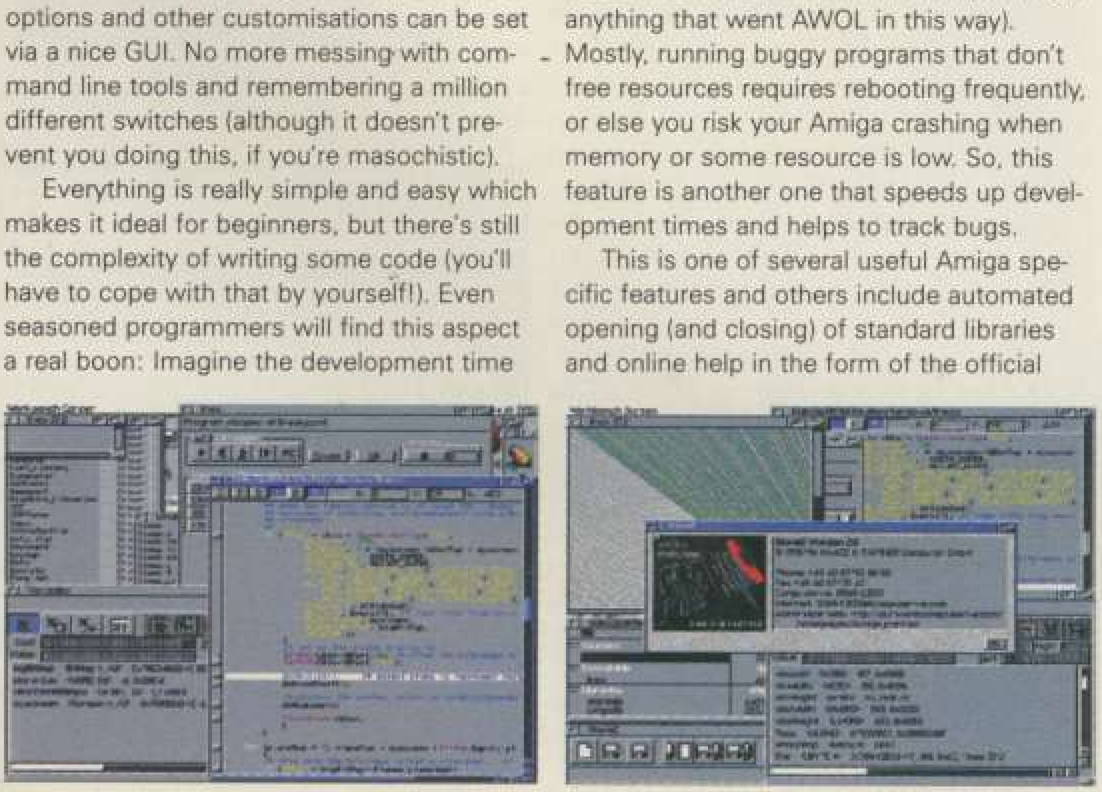
Even better news is that now StormC has the option of using Dietmar Eilert's GoldEd 4.0 (demo version included). There's no sacrifice: it's been integrated in the same way as StormC's standard editor. It's a clever idea since it doubtless frees up some resources to concentrate on developing the compiler. Plus, it removes one complaint against the package (the standard editor is not very customisable, so it might not suit some people).

Next on the modern features list is the protected environment that you can use to run programs. This tracks any resources (such as memory and windows) that your program obtains and makes sure they are freed when it terminates (and lets you know anything that went AWOL in this way). Mostly, running buggy programs that don't free resources requires rebooting frequently, or else you risk your Amiga crashing when memory or some resource is low. So, this feature is another one that speeds up development times and helps to track bugs.

This is one of several useful Amiga specific features and others include automated opening (and closing) of standard libraries and online help in the form of the official Amiga Autodocs (plus a manual on the ANSI C functions in German!).



▲ **All the main components, and a completed program.**



◀ **StormC! With the debugger and the great variable explorer.**

The Guts

So, underneath all this is there a decent compiler? Well yes, but a reserved yes. The quality and efficiency doesn't seem to match SAS/C, but the friendliness and simplicity it brings will largely overshadow these concerns for most users. It's also very strict on what it will allow as properly formed C code (which proves it's an ANSI C compiler!).

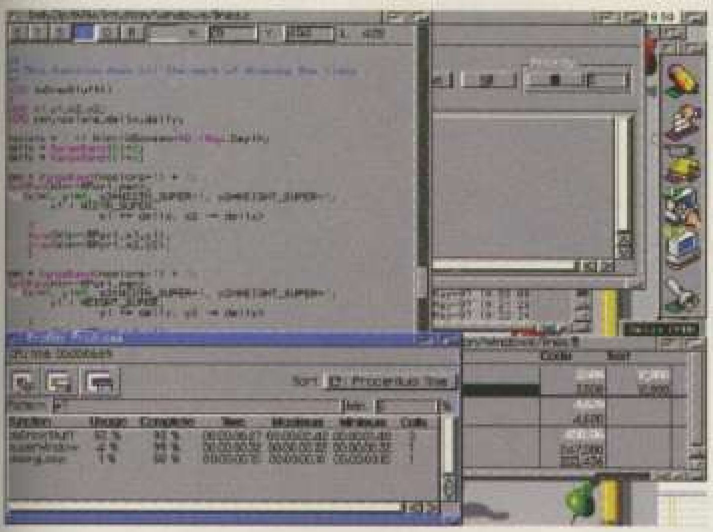
The StormC 'maxim' is apparently: "The program is in the test phase is equal to the final product [sic]". In practice it means the compiler can use the same options and generate the same code even if you're using the debugger or profiler. Benefits are obvious, how often have you fallen foul of a weird bug that isn't reproducible in the debugger?

StormC also has support for compiling for the PowerPC and for development of pOS applications, which is great news, even at this early stage. This shows the commitment that Haage and Partner have, and it's a clear indication that StormC is being actively developed. How many other commercial C compilers can you say that for?

Choices

One complaint levelled against the package is that its German roots are very evident. The manual is not the best translation in the world (see the StormC maxim above), and it sometimes makes funny reading.

But mostly it just means it takes a bit more effort to understand the point they're trying to get across. It's also not as complete or up-to-date as it could be, and the IDE is crying out for some online help with setting various compiler options. A couple of good highlights are the help for porting SAS/C sources (the compiler is already compatible)



and the separate summary and detailed description of the compiler switches.

These minor grumbles are probably more serious to beginners, which is a shame, since it's the one fly in the ointment in that respect. But it's still the only choice if you're just starting out and you want a much easier life. You could struggle with GCC for free, but you'll drive yourself to an early grave into the bargain (ask Fred Fish). Or you could make do with the very dated SAS/C environment, if you can find someone who might sell you a copy – and if you can cope with any problems yourself. Nothing comes close to StormC in terms of ease of use.

For more advanced users, it's still a great choice. Much time is saved using this tool, and that's what good programs should do. Some old SAS/C stalwarts may complain that it's missing this feature or that, but nothing really important is omitted. There's room for further development sure, but ultimately it does the job. Of course StormC is a commercial product, and while it would be nice to see some freeware packages learning from the user-friendliness of the project manager and IDE, we mustn't forget it's people like Haage and Partner that are showing other companies that the Amiga is still alive.

They have a wonderful product and need our support. The new pricing includes a much cheaper non-commercial licence, and it brings StormC within the grasp of the average user, so all-in-all it's a real winner. ■

Jason Hulance

▲ **The profiler is highly useful for identifying which routines are the most CPU heavy. These are prime optimisation candidates.**

STORMC V2.0
Developer: Haage and Partner Computer

System Requirements: OS3.0+, hard disk, RAM: 6Mb (2Mb for CLI versions), CPU: 68020

Ease of use..**93%**
Just the project manager on its own makes this program a joy to use.

Performance...**88%**
Slight worries about efficiency and non-optimal code, but they're only minor.

Value for money..................................**78%**
Even the new non-commercial license is a lot of money. But these people need supporting.

OVERALL
For anyone other than old SAS/C hacks it's the best.
87%

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NEW...

POWER UP

AMIGA™ GOES POWERPC™

POWER UP YOUR AMIGA...

*A further dimension is being added to Amigas with our new PowerPC based **BLIZZARD POWER BOARDS** for A1200, A1200 based Tower Systems and A1500/2000 systems along with the new **CYBERSTORM PPC** for A3000/4000 systems. You'll now be able to benefit from performance many times beyond the speed of the fastest 680x0 based boards.*

Designed as upgrades for existing systems, **Power Boards** incorporate innovative dual processor technology where a fast PowerPC RISC processor is combined with a 68K CPU, dynamically sharing memory and system busses.

While the original AmigaOS 3.x continues to run on the 68K CPU, supporting existing applications to provide backward compatibility, the PowerPC CPU is backed by comprehensive PPC Libraries which provide the functionality to integrate PowerPC into an Amiga multitasking environment.

Software developers can easily optimise their programs, step by step, porting single tasks to PowerPC code, which then run in parallel with 68k tasks. Leading Amiga software vendors are preparing ported or optimised versions of their software packages already. It is anticipated that a large quantity of software products supporting the PowerPC will be available soon.

Power Boards will be delivered with a comprehensive suite of utilities, including the PPC library, as well as tools for creative users. Among them is a Public Domain GNU C compiler for PowerPC (including sourcecode), many demo programs and utilities with sourcecode. In addition to this software, free developer support is available via FTP site.

Last but not least, a PowerPC optimised version of CyberGraphX V3 with RISC optimised CyberGL/3D plus MPEG functions and libraries is included (along with a special GGX driver to support the AGA chipset) with full and comprehensive documentation.

	Blizzard 603e PowerBoard	Blizzard 603e+ PowerBoard	Blizzard 2604 PowerBoard	Cyberstorm PPC
PowerPC CPU Clock Speed	603e 175MHz	603e 200MHz	604e 150-200MHz	604e 150-200MHz
Companion CPU	68030 50MHz	68040/68060 25-50MHz	68040/68060 25-50MHz	68040/68060 25-50MHz
Est. PPC Performance MIPS SpecFP95	@ 175MHz Approx. 250* Approx. 3.1	@ 200MHz Approx. 280* Approx. 3.5	@ 200MHz Approx. 350* Approx. 7.1	@ 200MHz Approx. 350* Approx. 7.1
Memory Option SIMM Sockets	Max. 64Mb 1	Max. 64Mb 1	Max. 128Mb 4	Max. 128Mb 4
SCSI On Board	Fast SCSI-II	Fast SCSI-II	Ultra Wide	Ultra Wide
Amiga Compatibility	A1200(+T)	A1200(+T)	A1500/2000	A3000/4000(+T)
Est. Availability	Summer '97	Summer '97	Summer '97	Summer '97

Blizzard 603e Power Board - A1200(+T)

The new Blizzard 603e Power Board is an inexpensive Power Up Accelerator for A1200 system owners who already have a board with a socketed full 50MHz 68030+MMU processor (these CPUs have a gold finish to the top surface) eg.50MHz Blizzard 1230-II, III, IV or similar. Featuring a 175MHz PowerPC 603e RISC CPU, the board has a socket for the 50MHz 68030, expansion capabilities of up to 64Mb high speed memory and built in SCSI-II controller.

Imagine the performance from your A1200 with this low cost board!

Blizzard 603e+ Power Board - A1200(+T)

The Blizzard 603e+ Power Board is the highest spec Power Up Accelerator for A1200 systems. Featuring a 200MHz PowerPC 603e RISC CPU, the board has a socket for a companion 68040 or 68060 CPU, expansion capabilities up to 64Mb of high speed memory and built in SCSI-II controller. This board is ideally suited to those owners who already use an accelerator with either a 68040 or 68060 CPU (ie. Blizzard 1240T/ERC or Blizzard 1260 owners or their equivalents).

If you want the BEST from YOUR Amiga A1200 - this is it!

Blizzard 2604 Power Board - A1500/2000

If you own either an A1500 or A2000 you can now take advantage of PowerPC technology with this 604e CPU RISC based board which has a socket for a companion 68040 or 68060 CPU, expansion capabilities up to 128Mb of high speed 64-Bit memory, built in Ultra-Wide SCSI controller and a high performance expansion slot for expansions such as the CyberVision PPC. The board is ideal for owners of accelerators with 68040 or 68060 processors such as the Blizzard 2040 or Blizzard 2060 owners (or their equivalents).

Want the BEST from YOUR Amiga A1500/2000? - Look no further!

CyberStorm PPC Board - A3000/4000(+T)

CyberStorm PPC is the ultimate accelerator for Amiga 3000(T), 4000(T) and systems with compatible CPU slots, offer blistering 604e performance - more than 10 times faster than any 68k based accelerator on sale today! Available with clock speeds of 150, 180 and 200MHz, the companion socket for the 68k processor accepts either a 68040 or 68060 CPU. The board provides 64-bit wide extremely fast memory expansion using pairs of standard SIMMs, dynamically shared by the two CPUs. Additionally, CyberStorm PPC comes with a DMA driven Wide ULTRA SCSI controller on board offering transfer rates of up to 40Mb/sec for even the most demanding of professional applications. A 32Bit high speed expansion connector, with DMA access to the main memory, is also provided for later upgradeability.

The 200MHz version of the CyberStorm PPC provides performance of more than 350 MIPS or approximately 8.1 SPECint95 and 7.1 SPECfp95* - breathtaking speed that goes far beyond that offered by most PC systems. In the second half of the year, an advanced graphics board will become available for the CyberStorm PPC expansion slot, providing a subset of the innovative CAIPIRINHA custom chip. By having a stand alone version of the DLRP (Display List Risc Processor), this board will offer superior display capabilities through higher VRAM-based resolutions, pixel depths and speeds, as well as the potential to begin developing software supporting the functionality of the forthcoming A\BOX system.

PRICING AND AVAILABILITY:

Options with or without 68k CPUs will allow users to fit the CPU from their existing accelerator. Delivery of Power Boards is scheduled for Summer 1997 following finalisation of CE approvals. Call now for full details.

Special prices available to existing BLIZZARD & CYBERSTORM board users

Blizzard 603e/603e+ Board...	175MHz	200MHz
with Empty 030 Socket	£289.95	
with Empty 040/060 Socket		£379.95
with 68030/50MHz fitted	£329.95	
with 68040/25MHz fitted		£429.95
with 68040/40MHz fitted		£459.95
with 68060/50MHz fitted		£614.95

POWER PC TECHNOLOGY, POWER PC SPEED and POWER PC PERFORMANCE

Cyberstorm PPC 604e Board...	150MHz	180MHz	200MHz
with No Processor	£479.95	£549.95	£629.95
with 68040/25MHz fitted	£519.95	£579.95	£669.95
with 68040/40MHz fitted	£549.95	£609.95	£699.95
with 68060/50MHz fitted	£709.95	£769.95	£859.95

**Quoted performance figures are estimations based on specifications from Motorola/IBM and are relevant to the PowerPC processor only.*

Prices include VAT @ 17.5%.

Owners of other makes of board or those who don't already have an appropriate CPU - please call for prices.

Harwoods... always the Fastest Amiga Boards and NOW PowerPC Technology for Amigas too!

CHECK OUT... NEW LOWER PRICES ACROSS THE RANGE OF BLIZZARD AND CYBER PRODUCTS!

CYBER BLIZZARD SPEED

STILL THE FASTEST, NOW LOWER PRICED, NO ONE ELSE COMES CLOSE!

CYBERVISION 64/3D

64-Bit ENGINE A2000/3000/4000 (T Series) 3D VERSION 24-Bit COLOUR ACCELERATED GRAPHICS CARD.

LOWER PRICES!

For all Zorro-3 and Tower System A1200s with Zorro II backplanes.

The core of this great board is the VIRGE GRAPHICS CHIP from S3. With 3D capabilities, it's able to process complex 3D functions in hardware (eg. shaded & textured surfaces) with Trilinear Filtering and Shading/Fogging for super realistic Real Time 3D Rendering. When used with CyberGraphX 3D library, Cybervision 64/3D can even offer a broad range of 3D facilities for any software developer.

CyberVISION 64/3D... 4Mb Version £169.95

MPEG Decoder - added to the Feature Connector to provide real time MPEG audio and video decoding at full size custom screens or, in Workbench windows (HQ display using 16/24Bit modes from CyberGraphX Workbench). Stereo audio output is provided via the supplied dedicated line output jack. Upgrade to a Cybervision 64/3D and MPEG bundle (from previous Cybervision 64) for a special low price! £149.95

Monitor Switcher - with integrated scan line doubler. Designed to fit into the Amiga slot, this gives full automatic switchover from the standard Amiga signal to Cybervision 64/3D's output. Both cards may be fitted inside A3000/4000 models leaving three Zorro-III slots free. £79.95

1240T/ERC TURBO ACCELERATOR MEMORY BOARD

A1200T* TURBO ACCELERATOR and MMU/FPU for *TOWER SYSTEMS

40MHz 68040 - 0Mb Standard, expandable to 128/256Mb

30MIPS with 60 Nanosecond SIMM fitted

CAN BE EXPANDED TO A FULL 68060

A super LOW COST A1200 Turbo Accelerator Board, ideal for housing on any *Tower System A1200 main board (mechanical dimensions, high power consumption and heat emission require an active cooling-cap, we therefore do NOT recommend fitting to standard A1200s without the appropriate modifications etc.). The "ERC" Processors used on these boards are recycled and vigorously tested 68040 CPUs operating at 40MHz with MMU/FPU - an excellent guaranteed and competitively priced alternative. Available options such as the SCSI-IV Kit and RAM are shared with the Blizzard 1230-IV and 1260.

LOWER PRICE!

Blizzard 1240T/ERC Turbo 40MHz 68040 and MMU/FPU, 0Mb 32Bit Fast RAM, exp. to 128/256Mb £199.95

1260 TURBO ACCELERATOR MEMORY BOARD

EASY TRAPDOOR INSTALLATION... No modification necessary. Reliable low heat output.

A1200 TURBO ACCELERATOR and MMU/FPU

50MHz 68060 - 0Mb Standard, expandable to 64/192Mb

38.71MIPS with single sided 60/70 Nanosecond SIMM fitted.

Offers Amiga A1200 owners FULL 68060 POWER with a board that simply plugs into the trapdoor slot. Your A1200 will then operate at TWICE or even THREE TIMES THE SPEED of an '040 based upgrade and up to FIVE TIMES THE SPEED of a standard A4000! Available options such as the SCSI-IV Kit and RAM are shared with the Blizzard 1230-IV and 1260.

Blizzard 1260 Turbo 50MHz 68060 and MMU/FPU, 0Mb 32Bit Fast RAM, exp. to 64/192Mb £349.95

LOWER PRICE!

1230-IV TURBO ACCELERATOR MEMORY BOARD

EASY TRAPDOOR INSTALLATION... No modification necessary. Reliable low heat output.

A1200 TURBO ACCELERATOR and MMU

50MHz 68030 - 0Mb Standard, expandable to 128/256Mb

9.91MIPS with 60 Nanosecond SIMM fitted.

The highest performing 68030 Accelerator available for your A1200. With its 50MHz 68030 and MMU, the 1230-IV offers BETTER PERFORMANCE at a LOWER PRICE. With a Sysinfo rating of 9.91 using a 60 ns SIMM you can see the 1230-IV is very fast... a performance gain of up to 500% is achieved! Via its Fast Expansion Bus, an optional SCSI-2 Controller module can easily be fitted. An industry standard SIMM socket provides for up to 128Mb of auto-configuring 32Bit Fast RAM (up to 256Mb with the SCSI-2 option using its extra SIMM socket).

Blizzard 1230-IV Turbo 50MHz 68030 and MMU, 0Mb 32Bit Fast RAM, exp. to 128/256Mb £99.95

Fast 60 Nanosecond SIMM RAM Expansions - 32Bit, 72Pin £Call

Motorola Maths Co-Processor - 68882 PGA type FPU, 50MHz £49.95

LOWER PRICES!

BLIZZARD SCSI-IV KIT

SCSI-2 MODULE for 1230-IV, 1240T/ERC & 1260, & ADDITIONAL 128Mb SIMM SOCKET

(Fast SCSI-2 DMA Controller - upto 10Mb/s transfer rates with additional SIMM socket for RAM)

Blizzard SCSI-IV Kit £79.95

1230-IV, 1240T/ERC and 1260 FEATURES

- May be disabled with simple keystroke on boot up - for full games compatibility even badly programmed/older software
- Battery backed self re-charge Real Time Clock
- High performance expansion with full 32Bit wide DMA
- Easy trapdoor installation - no modifications required (1240T/ERC fits in Tower)
- 1230-IV features PGA FPU socket allowing optional 50MHz 68882 FPU

CYBERSTORM II

CAN BE EXPANDED TO A FULL 68060

AMIGA 68040ERC AND 68060 ACCELERATORS

You can choose between the 68040/40ERC Cyberstorm II or the ultra powerful 68060 version. When you fit a Cyberstorm II 68060 Accelerator to YOUR A3000, A3000T, A4000 or A4000T you can for example, render a graphic with Imagine 2.0 software in just 2.4 minutes! Compare that with 10.34 minutes on a standard A4000 '040/25! With no jumpers, both Cyberstorm II models are fully plug and play and, A4000 users even have the option of a SCSI-2 Module if they wish (A3000s already have SCSI built in).

- Up to 128Mb of standard SIMMs can be installed and you can even transfer the 72Pin SIMMs from your Amiga A4000 straight onto your new Cyberstorm.
- Optional SCSI-2 Module
- If your budget currently only covers the cost of Cyberstorm II 68040ERC, you can always upgrade later to the full 68060 processor for the extra power!

LOWER PRICES!

Cyberstorm II 68040/40 40MHz 68040ERC - 0Mb, Expandable to 128Mb £299.95

Cyberstorm II 68060/50 50MHz 68060 - 0Mb, Expandable to 128Mb £449.95

Cyberstorm II SCSI-2 Module £79.95

Cyberstorm II SIMM RAM Expansions (Please call for a range of SIMM prices) £Call

2040ERC TURBO ACCELERATOR MEMORY BOARD

A1500/2000 TURBO ACCELERATOR and MMU/FPU

40MHz 68040 - 0Mb Standard, expandable to 128Mb

30MIPS with 60 Nanosecond SIMM fitted.

The Blizzard 2040ERC is a super LOW COST board which offers A1500/2000 owners the opportunity to upgrade to the same performance as the Blizzard 1240T/ERC Board. Users will then be able to enjoy full A4000/040 power as well as take advantage of the built in SCSI-2 interface. The "ERC" Processors used on these boards are recycled and vigorously tested 68040 CPUs operating at 40MHz with MMU/FPU - excellent guaranteed competitively priced alternative.

CAN BE EXPANDED TO A FULL 68060

Blizzard 2040ERC Turbo

40MHz 68040 and MMU/FPU, 0Mb 32Bit Fast RAM, exp. to 128Mb £299.95

LOWER PRICE!

2060 TURBO ACCELERATOR MEMORY BOARD

A1500/2000 TURBO ACCELERATOR and MMU/FPU

50MHz 68060 - 0Mb Standard, expandable to 128Mb

38.71MIPS with 60/70 Nanosecond SIMM fitted.

Offers Amiga A1500/2000 owners the same specification as the remarkable Blizzard 1260 Turbo (A1500/2000s will operate at up to FIVE TIMES THE SPEED of a standard A4000) with FULL 68060 POWER and also includes built in SCSI-2 interface!

Blizzard 2060 Turbo

50MHz 68060 and MMU/FPU with SCSI-2, 0Mb 32Bit Fast RAM, exp to 128Mb £499.95

LOWER PRICE!

MOTOROLA MOTIVATED

Blizzard and Cyberstorm products use MOTOROLA 68000 and PowerPC series processors. They run WITHIN the electrical timing specification laid down by Motorola to prevent any possible overheating/reliability problems. So when you pay for a 50MHz CPU for example, that's exactly what you get... not a 40, 33 or even a 25MHz CPU "clocked" to 50MHz! Look out for the **MOTOROLA MOTIVATED** logo - your guarantee of our commitment to quality and reliability - **BEWARE** of "clocked" CPUs! "ERC" and ERC processors used on selected boards are recycled and vigorously tested 68040 CPUs operating at 40MHz - an excellent guaranteed and competitively priced alternative.

What the Magazines think...

Blizzard products have consistently achieved the highest magazine accolades and awards!

Amiga Shopper *"...1260 is destined to become the ultimate object of desire for A1200 owners"* - 91% STAR BUY Award

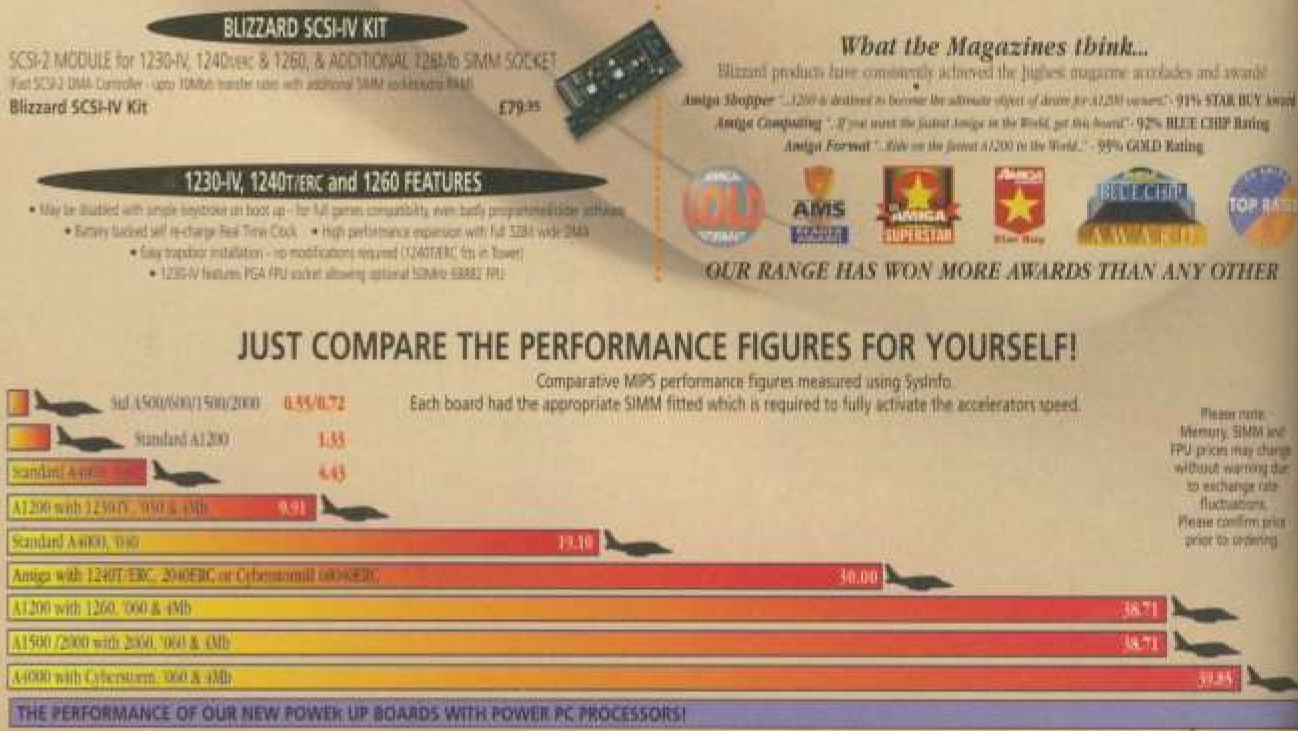
Amiga Computing *"...If you want the fastest Amiga in the World, get this board"* - 92% BLUE CHIP Rating

Amiga Format *"...Ride on the fastest A1200 in the World..."* - 95% GOLD Rating

OUR RANGE HAS WON MORE AWARDS THAN ANY OTHER

JUST COMPARE THE PERFORMANCE FIGURES FOR YOURSELF!

Comparative MIPS performance figures measured using SysInfo.
Each board had the appropriate SIMM fitted which is required to fully activate the accelerators speed.



Please note: Memory, SIMM and FPU prices may change without warning due to exchange rate fluctuations. Please confirm price prior to ordering.

COMPATIBLE WITH ANY STANDARD VIDEO SIGNAL AND S-VHS!

Pro-GRAB™ S-VHS 24RT Plus

NEW LOWER PRICES!

The revolutionary S-VHS **ProGrab™ 24RT Plus** with Teletext is not only the best way to get crisp colour video images into your Amiga, from either live broadcasts or taped recordings, it also costs less than any of its rivals. This real time PAL/SECAM/NTSC* 24-Bit colour frame grabber/digitiser has slashed the price of image grabbing on the Amiga and, at the same time, has received rave reviews for its ease of use and excellent quality results. ProGrab™ has earned honours from just about every Amiga magazine and Video magazines too! And... with ProGrab™ you needn't be an expert in Amiga Video Technology, a simple 3 stage operation ensures the right results... **Real Time, after time.**

Take a signal from TV with SCART output

Use either Satellite signals or VCR output of TV or Video, including S-VHS

STAGE 1

Select any video source with S-VHS or composite output. This could be your camcorder, TV with SCART output, satellite receiver, domestic VCR/player or standard TV signal passing through your VCR/player... the choice is yours.

STAGE 2

With ProGrab's software, select an image you wish to capture using the on screen preview window and Grab (because the hardware grabs frames in real time, there's no need for a freeze frame facility on the source device). Once grabbed, simply download and view the full image on your Amiga screen. ProGrab also includes a Teletext viewing and capturing facility from either TV or satellite sources.

STAGE 3

Use the 'grabbed' image with your favourite word processor, DTP or graphics package. ProGrab really does make it that simple!

Grab images with your Camcorder including S-VHS

ProGrab™ 24RT Plus...

- Supports all recent Amigas and is also fully AGA Chipset compatible. You can render images in any Workbench screen mode resolution including HAM8 mode (Amiga RAM permitting).
- Saves and Loads images in IFF/ILBM, IFF/ILBM24, JPEG, BMP, PCX, and TARGA file formats. ProGrab saves animations as Anim5 files and animations with sound (requires PCMCIA interface and separate sound sampler) as Anim5 + 8SVX files. A range of image processing effects, palette computing routines (AGA only) and dithering methods are featured in ProGrab Version 2.6.x. Photogenics fully supports ProGrab with a custom 'Loader' to enable grabs directly from within the program - this direct input method will save YOU more time when handling large images.
- Software has built in mono and colour animation facilities. Number of frames is dependant on Amiga RAM.
- Release 2.6.x software now includes...
  Additional Teletext Facilities - with either terrestrial or satellite TV signals.
  Larger Preview Window - double resolution and four times area of previous ProGrab software.
  International Support - now compatible with composite PAL, SECAM and NTSC - straight from the box.
  Larger Preview Window - double resolution and four times area of previous ProGrab software.

Pro-GRAB 24RT Plus

ProGrab™ 24RT Plus costs just £99.95 **LOWER PRICE!**
and is supplied with just about everything you'll need•...

- ProGrab™ 24RT Plus Digitiser
- Latest ProGrab Version 2.6.x Software
- Mains Power Supply Unit
- Parallel Port Connecting Cable
- User Manual
- Input sockets for Composite and S-VHS.

• A video source cable will be required to match your own equipment - ask us for details.
• Standard ProGrab hardware is PAL/SECAM/NTSC compatible. Interlace mode options are available with PAL & SECAM only.
ProGrab supports any Amiga with Kickstart 2.04 or later and a minimum of 1.5Mb free RAM.

PCMCIA Interface - A600/1200

ProGrab's optional PCMCIA Interface includes the latest version software and extends performance for serious or professional users - offering the following benefits...

- Faster downloading times (up to FIVE times quicker)
- Improved animation speeds of up to 11fps (mono) and 3.5fps (colour)
- Saving of animations direct to your Amiga's hard drive
- Freeing of your Amiga's parallel port for use by a printer or other peripheral
- Sound sampling and animation capabilities (separate sound sampler required, see right)

PCMCIA Interface **LOWER PRICE!** £29.95

Stereo Sound Samplers

Two high quality 8-Bit Sound Samplers, specifically designed for use with our ProGrab 24RT digitisers, are available (PCMCIA Interface required).

The Hi-Fi version features the same 30MHz A/D convertor used in the ProGrab, maximum frequency is therefore only limited by the Amiga's hardware.
It also has a higher band width (40Hz to 20KHz) than our standard sampler.

Standard Stereo Sampler	£19.95
Hi-Fi Stereo Sampler	£24.95

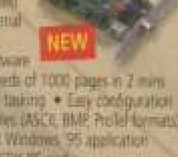
ProTel™ Terrestrial/Satellite Teletext Decoders

Amiga or PC add ons for grabbing terrestrial or satellite TV Teletext pages which don't need a dedicated Teletext TV/Video to operate... required signal is simply the output taken from a standard VCR or a TV that provides a suitable video out signal. Once information has been downloaded, ProTel allows you to view pages instantly... no more waiting whilst your TV searches!

ProTel™ for Amiga
Stand alone unit designed to match your Amiga allowing files to be exported as ASCII Text for use in your word processor or saved as IFF graphics for DTP presentations.

ProTel™ Amiga Teletext Decoder £44.95

ProTel™ for PC
ProTel PC Teletext Decoder - internal ISA PC card



NEW

- Friendly software
- Capture speeds of 1000 pages in 2 mins
- Background tasking • Easy configuration
- Save page files (ASCII, BMP, ProTel formats)
- Native 32Bit Windows '95 application
- Requires 386DX PC and 8Mb RAM (12Mb Rec.), Windows '95/3.1 or Workgroup 3.11, VGA display, Mouse and 1 free 8/16Bit ISA slot - MINIMUM
- PAL and SECAM

ProTel™ PC Teletext Decoder £29.95

Camcorder User commented... 'If you're looking for a high resolution 24 bit digitiser then at this price, ProGrab 24RT represents great value for money.*'*

ProGrab™ - Voted as The Best Video Hardware *product for the Amiga. Especially pleasing because the award comes from Amiga Shopper magazine's readers... Satisfied Customers!*

ProGrab™ - Amiga Format 95% Gold Rating *and comments like... 'ProGrab 24RT Plus is quite simply the digitiser to get', 'Incredible value for money - no other digitiser offers so much for so little' and 'Offers far more features than any other digitiser near the same price'*

ProGrab™ - Amiga Shopper 95% STAR Buy *and remarks like... 'Sharp, crisp and faithful to the original colours, we were mightily impressed' and... 'Highly Recommended. Whether you are a Videographer or a Graphic Artist, look to the ProGrab 24RT Plus. It's a winner'*
Hi-Fi Stereo Sampler - Amiga Shopper 92% STAR Buy April 1997.

CU Amiga said ProGrab™ is... 'Just the job for beginners and semi-professionals on a tight budget' and, 'very hard to beat. For the money, nothing can touch it.*'*

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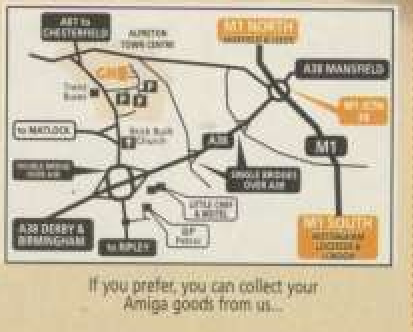
We offer prompt shipment with fully insured express delivery options throughout the UK, Europe and Worldwide at a modest cost. If ordering by mail, please call to confirm the appropriate delivery charges.

GH WARRANTY...
Manufacturers' standard warranties apply or ask about GH's comprehensive extended options which are always recommended for professional users to minimise costly down time - details available on request.

ALL PRICES INCLUDE VAT
and are shown for personal users only. Business users please ask for VAT Exclusive prices.



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NEW... Final Writer 97

Final Writer
alt.fw97
Inside

The Best of Both Worlds
Amiga users have the best of both worlds with SoftWood's new Final Writer 97. Building upon what is widely accepted as the best word processor for the Amiga, SoftWood has added easy to use, trouble free desktop publishing functionality to Final Writer. With new Final Writer 97 it is possible to create just about any document you can imagine - quickly, easily and without frustrating program errors.

Final Writer 97 was born out of the necessity for a powerful, bug-free, simple to use way for Amiga owners to create newsletters, brochures and forms in addition to documents normally created in a WP. As you will see, Final Writer 97 does this and more. Over the years Final Writer has matured from the first Amiga word processor to offer outline fonts (originally known as Final Copy) to now the first word processor on any computer to offer both word processing and a rich set of desktop publishing capabilities.

New Features
Can you use the new features in Final Writer 97? Consider how you use a typical word processor. First, you begin entering text at the top of page one. As you enter more text it must be added to text you've already entered. With the exception of small text blocks in some word processors, you can't normally enter text anywhere on your page.

Now consider what you can do with a desktop publishing program. In a desktop publishing program you can enter text anywhere on a page and continue that text on any other page. You've seen this technique used in newspapers and magazines where a feature or article starts on page 1 and is continued on page 5. You've also seen columns of different widths on the same page as well as headlines that span more than one column and multiple lines. All of these layouts can be created using the new Text Frames feature.

Final Writer 97 combines the most comprehensive Word Processing features, with Desktop Publishing functionality, in one easy to use package, for Amiga owners who want the best of both worlds. From simple correspondence to complex newsletters, Final Writer 97 handles all tasks with ease, meaning for the first time on Amiga, Mac or PC, there's a product worthy of the name 'Document Publisher'.

With these new features you can:

- Enter text anywhere on a page
- Continue text on any other page
- Resize the space or frame that text is in
- Flow text around other text
- Set "Snap-To" guides to align text and graphics
- Position text and graphics one pixel at a time

SoftWood has not changed the way you are used to working in Final Writer, they have simply provided new tools. These new tools along with the features Final Writer already incorporates will allow you to create newsletters, forms, brochures and other documents never before possible with a normal word processor.

Final Writer 97 truly offers the ultimate in document creation. Whether you are typing a simple letter or producing a complex newsletter, Final Writer 97 gives you the power to do your job quickly and easily.

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You've kept your Amiga because it's still the most powerful, easy-to-use computer on the market. Now, enhance your software library by upgrading to the most powerful, easy-to-use word processor on any computer.

System Requirements: Amiga with a Hard Drive, Workbench 2.04 or above and a minimum of 2.5Mb RAM (more recommended).

SoftWood Final Writer 97	£49.95
Upgrades are available for registered users, please call for prices.	
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Final Writer Lite	£19.95
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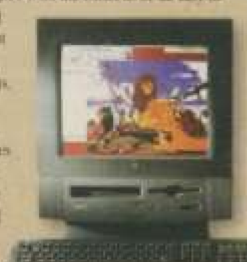

Software: there are over 1800 titles specifically written for PowerPC Macs alone, plus thousands from pre PowerPC days which are still compatible. Industry standards such as Word, Pagemaker, Word Perfect, FileMaker Pro, Excel, Quark XPress, Photoshop and many others have been developed for Macs.
Creativity: Apple still lead the creative world - 80% market share in colour publishing, most web sites are authored with Macs and post production video editing is dominated by the Macintosh too.
The magazine you are reading now was published using Macs!
Internet and Communications: all Macs are Internet Ready - many include built in modems and fax facilities etc. and standards like Netscape and Internet Explorer ensure the Net is easily accessible.
Connectivity and Expandability: all Macs incorporate built in networking and external SCSI connections - adding printers, drives, scanners etc. really is plug and play!
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Apollo 1260/66

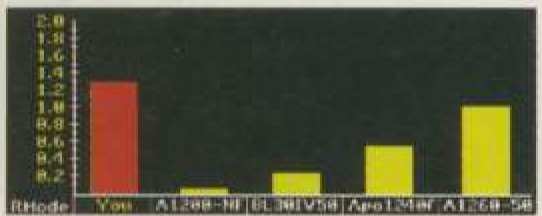
■ Price: £399.95 ■ Supplier: Eyetech Group
✆ +44(0)1642 713185 http//www.eyetech.co.uk/~eyetech

The Amiga world waits to see if PPC, DEC or Alpha will be the processor of the future... meanwhile Apollo have snuck up with the fastest 68k accelerator yet.

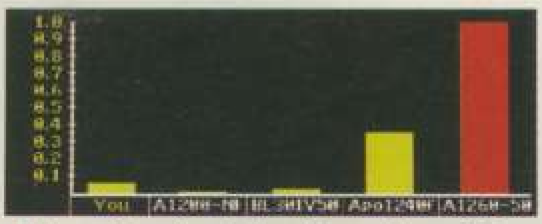
The Motorola 68060 is the final chip in the revolutionary 68000 series, the chip that gave birth to the Amiga, the Atari ST and the Macintosh. Now that the Macintosh has moved over to PowerPC, the Amiga is the only computer still using the 68k series as a CPU. These days Motorola point their clients in the direction of the PowerPC. Because of this, the 68060, one of the best CISC CPU designs to come off the production lines, ceased development several years ago, never making it beyond a measly 50MHz.

The fastest Amiga ever

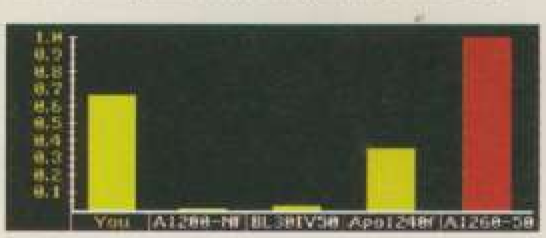
The Apollo board runs an '060 board at 66MHz. As Motorola have never produced a 68060 running at this speed, you might wonder how Apollo have done this.



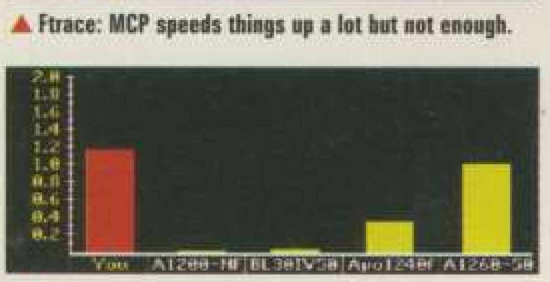
▲ **Dhrystones: A good basic speed test. Marks are relative to the Blizzard '060 (Blizzard = 1).**



▲ **Ftrace: Abysmal results barely better than an '030.**



▲ **Ftrace: MCP speeds things up a lot but not enough.**



▲ **Ftrace: Oxypatcher saves the day!**

Overclocking a processor is generally considered to be naughty, bad for the life and reliability of a CPU. In this case, there is a subtle difference. Pull the heatsink off, and you will see that the chip is marked XC68060RC50A. That A indicates that this is the latest mask revision of the chip, an improvement in the manufacturing techniques which means that while the chip is still rated at 50MHz, it is capable of better. Apollo have not been as irresponsible as other magazines have implied in overclocking this processor so much. Apparently Motorola consider it to be just about safe at 75MHz, Apollo chose 66 to give a margin of safety.

Telling us that this chip could cope at 75MHz was like waving a red rag at a bull. We couldn't find a 75MHZ crystal, but we tried it with an 80. It sneered at our efforts until we fed it a 50ns SIMM. We were up and running with an Amiga faster than any before. It was impressive – for all of two minutes before it crashed. By contrast, in the weeks that we have had this board running 'off the shelf', it hasn't given any problems.

The software issue

The development of the '040 and '060 saw major advances over the 6888x floating point co-processors used with the '020 and '030. The newer processors are much better at this type of math, essential to certain types of software such as rendering packages.

Unfortunately most software is written assuming 68882 code, some of which is not implemented in the more advanced instruction sets of the later processors. This is why the Blizzard boards are supplied with a piece of software called Cyberpatcher which patches calls to the 68882 FPU so that they use the new '060 functions more efficiently. We last tested an Apollo '060 board, in October of last year, we couldn't recommend it because it had no similar patchers.

This board is distributed with a disk containing the necessary '040 and '060 libraries, along with the MCP commodity, which has a number of patches that drastically improve performance. Our tests showed that if you can bring yourself to deal with MCP prefs, this board does most things at the kind of speeds Cyberpatcher can manage. Alas, it isn't the solution to everything.

The Ftrace test on AIBB, a good real world model, still showed the Apollo board suffering badly. Just as we were getting worried, we heard about a new commercial patcher.

Oxy Saviour

Oxypatcher claims to do everything that Cyberpatcher does and more. Feed it to this new '060 board and suddenly things look a lot better. An Imagine render sped up from 2 minutes 6 seconds without Oxypatcher to 27 seconds with. With Oxypatcher on the loose, this board is able to be a real challenger. Expect a full review of Oxypatcher soon.

The Blizzard 1260/50 sells for £75 less, so this is not amazingly cheap. Check the chip of a recent Blizzard before making your choice. We don't recommend this without Oxypatcher, as the things that really need a speed increase are just the things that need patching. Oxypatcher currently costs 39DM via email from newgkorte@aolcom. Pay the price and get a board a third faster than any other board on the market. If it is speed you are after, this is current King of the hill. ■

Andrew Korn

APOLLO 1260/66
Developer: Apollo

System Requirements:
A1200

Ease of use **80%**
Simple installation disk, but there's no advice on how to ge
the best from MCP.

Performance **95%**
Slips on a few points, but cured by Oxypatcher. 30% faste
than anything else.

Value for money **83%**
Does the new mask revision chip cost enough to justify th
higher price?

OVERALL
If you must have the fastest, you must have this.
88

p.OS Pre-release

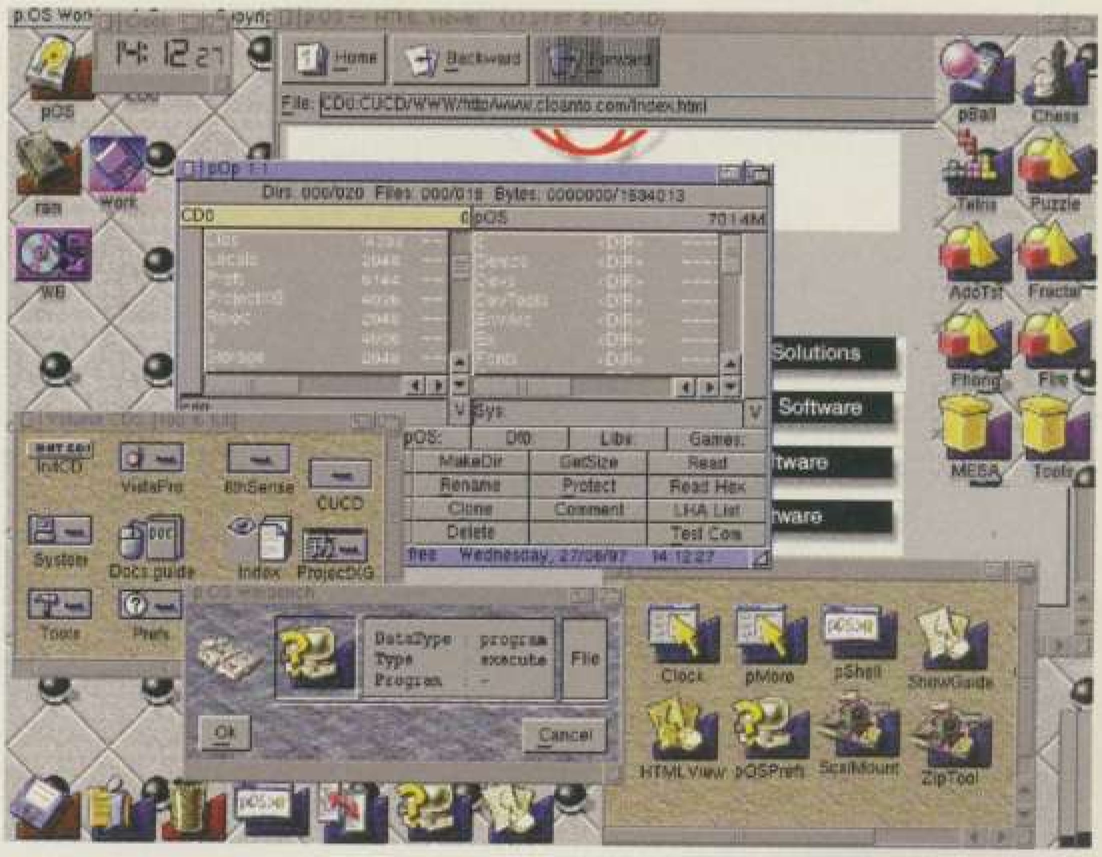
■ Price: £19.99 ■ Supplier: Schatztruhe/Weird Science © 0116 246 3800 ■ Developer: ProDAD

Finally we get to see p.OS. The future of the Amiga or just an interesting dead-end?

If ProDAD have their own way, this CD is going to be the first real glimpse that you will have of the future of the Amiga. p.OS, the portable operating system, is designed as a direct replacement of AmigaDOS. PIOS have announced that they will offer it as an option on their CHRP based systems, supplying this as an Amiga-like environment which will go alongside BeOS and MacOS.

This current release runs on 680x0 Amigas alongside AmigaDOS and is really more of a taster than a full OS. Trying out p.OS preview does tend to give me an extreme mixture of feelings. On the one hand it makes it very clear that ProDAD have put in some seriously good work, whilst on the other it makes it very clear that there is a lot more work that needs to be done. The installation on this CD provides you with a fully functioning p.OS Workbench environment with some brilliant features, but it is heavily reliant on AmigaDOS.

The idea is to give you a good idea of what p.OS has to offer, so that when the full version comes out, you will upgrade to that. ProDAD are not going to charge you for this - if you buy the full program, they will refund the difference.



▶ A p.OS Workbench being used to access a CU Amiga cover CD. The highly configurable system includes 3 seperate icon sets, with more promised.

Boot 'em up

Booting up p.OS reveals a Workbench environment which at first sight reveals nothing much more than you might expect from a couple of simple hacks and an icon replacement. As you start to use the environment, you realise that there is a lot more to it. The basic layout is particularly similar to Workbench, which makes it very easy to get used to. There's a few small differences, but similarities are large enough to convince sceptics that this is really an Amiga OS.

The display system that ProDAD employ is quite a departure. Graphics are calculated at 24 bit colour depth and are dithered to whatever screen depth you display at. Amiga Workbench utilises a reasonably clever system of grabbing pens for colours which crop up quite a lot, whereas p.OS seems to dither images on the fly from a distributed palette, which means that it can look a bit funny even on 256 colour screens. A four colour backdrop that I was using had a grey background not used as one of the p.OS pens, as a result it seemed to appear dithered even in 256 colours, and totally miscoloured in 32.

The advantage of this is that it does display relatively fast – windows move solidly at acceptable speeds. Use is fine with a reasonably nippy AGA machine, but there is no doubt that this is a system best suited to fast processors and graphics cards. As the OS is intended to eventually run on next generation super Amigas, this isn't a problem.

What do you get?

- Configurable taskbar
- Advance drag and drop
- Icon docks
- Full p.OS shell
- Opus 4 like Directory util.
- Filetype recognition
- HTML Amigaguide
- Built in image viewer
- Amigaguide viewer
- Tetris & other games
- Fractal demos
- Storm C for p.OS
- Animation effects util.

Drag and drop

There isn't enough space here to go in depth into all the features of p.OS, that is more the domain of a feature than a review. There is a lot in this, a couple of noteworthy features are filetyping, which allows the OS to recognise different types of file and load an appropriate display utility, and the excellent drag and drop implementation. You can drag and drop transparently into almost anything. You can drop an icon into a file requester, into a shell, over an appropriate launcher icon etc, and p.OS uses a highlight system so that you know that you are over something that the file can be meaningfully dropped into.

There are numerous little touches which make this a very nice working environment, such as being able to 'expand' images on the Workbench so that you can preview them in a window, very fast datatypes and blissfully easy drag and drop configuration.

Functionality

The rather worrying aspect of all this is that there are some considerably important areas that need addressing quite badly. A lot of the functions required to make this an entirely stand alone OS just do not appear to be there, and rather too much appears to hook into AmigaOS, not a good sign for a quick PPC release. At the moment p.OS appears to be a very sophisticated Workbench replacement in the Opus Magellan mould rather than a fully fledged OS. With more than just a mountain of work to do and also the uncertainty of not knowing which way Gateway 2000 is going to turn, it's hard to know what the future of p.OS will be.

It has always seemed a little unlikely that a small software firm specialising in animation packages could pull off a fully fledged, world beating OS, but having seen this I can't help but think they might do it. ■

Andrew Korn

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DISK - [illegible]

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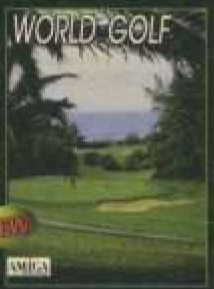
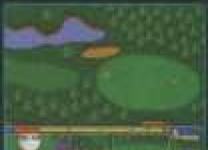

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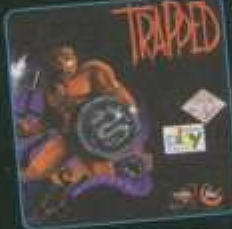

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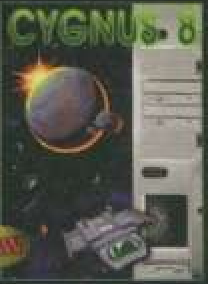
Amiga CD : £19.99



Cygnus - 8

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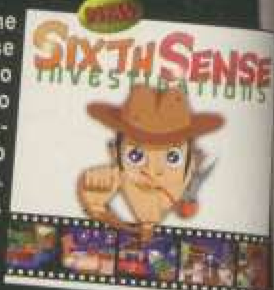
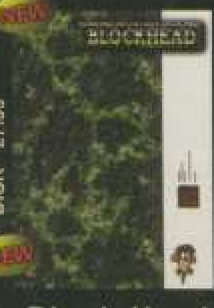
Construct a large scale tradin empire in a rich galaxy of planets turn criminal and raid space fleets? It's your choice in this freedom sci-fi simulation.

Amiga CD - [illegible]

Fasten your seat belts and be prepared for an experience like you've never seen before on your Amiga. Flyin' High is here and it takes you to a new dimension of 3D-Racing Games. Step on the gas and race over fully textured and absolutely crazy tracks, on asphalt, mud, field paths and slippery ice.
On a 68030 Amiga the game is great fun. Playing with 4 players on a 68060 is really impressive.*Req: AGA 6MB ram, Harddisk.*



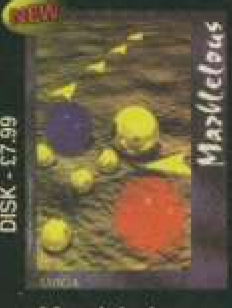
"Sixth sense investigations" is a new graphics adventure for the Amiga, based on the classic LucasArts style games. The base storyboard tells of a crazy young guy who has the ability to communicate with the spirit of a sarcastic man. A friend, who thinks of himself as a detective, profits from the psychic abilities of his friend (the crazy psychic guy), by using his skills to solve the most bizarre problems ofthe rich. *Req: AGA 2MB ram.*



DISK - £7.99

Block Head

Fast thinking puzzle game comprising: Intuitive **Controls,** Challenging difficulty curve. Random Level mode, dozens of power-ups, Great music.



DISK - £7.99

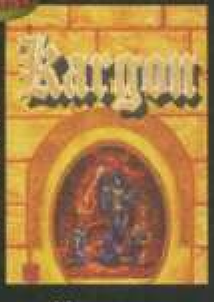
Marblelous

100 brain teasing levels each more difficult - you control a metalic ball using your mouse and have to find your way to the exit.

DISK - £9.99

XP-8

XP-8 is a 256 colour AGA vertical scrolling shoot'em up, featuring 4 way - 50fps scrolling, wicked music, sound effects and amazing animated alien space-craft.



DISK - £14.99

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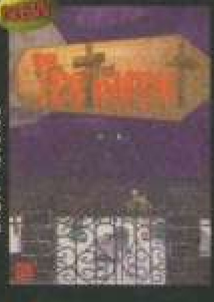

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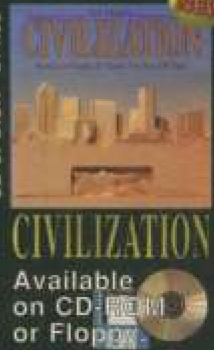

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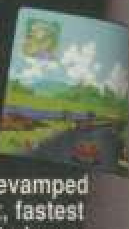

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FFNews 2.0

AMIGA SUPERSTAR

■ Price: £29.95 ■ Developer: Thorsten Stockmeier ■ Supplier: Eyetech © 01642 713185 www://eyetech.co.uk/~eyetech/

The Amiga got off to a slow start with full featured Usenet Newsreaders, and though FFNews has already seen a public incarnation released it was hampered with a lack of features and a large bug list.

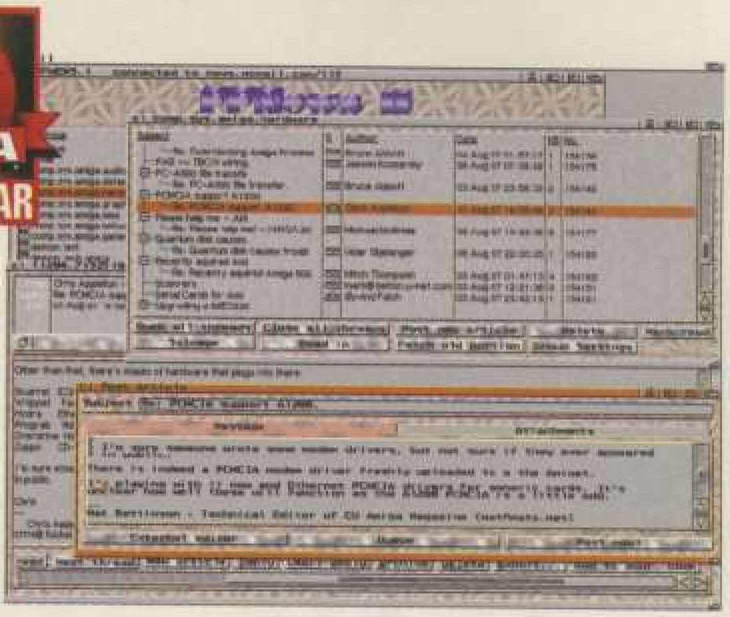
However, it seems all the interest has spurned Germany's Thorsten Stocksmeier, onto bigger and better things. FFNews 2.0 is a major revamp so, excitedly, we spun this preliminary version. FFNews is a MUI application, and exploits this through the use of MUI features. It goes a little too far in the preference with lots of pages, with only a few gadgets/options on each. There are many options in FFNews 2.0, including; built in tag lines, PGP encryption support, mailing list and standard filters, configurable buttons for the reader window, auto download, pop3 and SMTP mail support built in and more.

To begin, we need to subscribe to some newsgroups using the Group Manager window. The first time the Group Manager is run, FFNews downloads a massive list of newsgroups which can take ages. Handling of the 20,000 odd list is excellent, with a quick find to search for keywords such as Amiga. It's also possible to subscribe wildcards and there's an excellent newsgroup scratchpad where some interesting groups can be dragged to for checking out later.

Browsing a newsgroup activates a new window. Here FFNews 2.0 proves to be a fully threaded reader showing all the posts neatly nested into their hierarchies. There's very handy buttons to fold all the threads for quick access to interesting topics. Clicking on a message fires up the reader window, making three sizeable windows on the screen which I think is cluttersome.

MIME attachments are in a frame at the top right, and buttons at the bottom choose such functions as navigating to the next new message, replying via E-mail or a public post etc. Sadly the icons are too large, so there's a large scroller bar to move across them all. You can turn the images off but even the text links are too large. Although luckily you can drop in small images, so hopefully this will come soon. I wish the E-mail/News posting GUIs had a touch more control for cross-posting but the built in MUI text editor is adequate enough to make carriage returns. The scheme isn't as well thought out as Microdot II, but FFNews is still a great newsreader with plenty of future promise. ■

Mat Bettinson



▲ **FFNews 2 is a superb news reading package. Here we can see all the windows used in browsing and replying.**

System Requirements:
Internet connection and MUI required.

OVERALL
The Amigas best newsreader to date.
90%

NewYork 1.0

■ Price: US$35 ■ Developer: Finale Development ■ Supplier: GamaSoft http://www.mich.com/~twalling/gamasoft/

NewYork is a new contender to the newsreader throne, coming from Finale Developments – authors of the ClassAct GUI system and allegedly the forthcoming Web Cruiser browser. New York itself is from ClassAct author, Christopher Aldi, so we can expect it to look a lot different from the MUI newsreaders. Choice is good.

The main window has the newsgroups at the top, in a separate partition, but when you click on a newsgroup the top partition turns into a list of messages in that group. I've got two things to say about this. Firstly it's a brilliant idea, there's no point wasting space on the newsgroup list when you're reading a newsgroup. Secondly, unfortunately, the author didn't seem to think that threading was important and it remains completely unimplemented. Quite frankly this is outrageous.

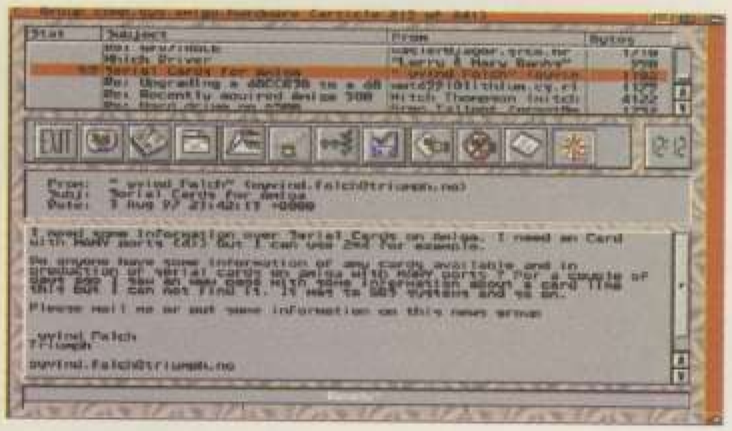
It's difficult to find the messages and threads you want, as the number of messages can't be folded into their respective threads. To make matters worse, you can't even drag the message partition larger. Clearly we're suffering from ClassAct's deficiencies over MUI whatever critics may say.

On the plus side, the function buttons in the middle of the screen are extremely well drawn. There's even a pop up MUI bubble-style help for each, though it seemed erratic. Pressing the follow-up button does spawn a new window which seems appropriate and neat. There should be a way to snapshot the windows so they open in your preferred size but I couldn't find it, which meant resizing the posting window every time. Other nice features include the small time display, for seeing how long we're online, and the hierarchial subscriptions manager cutting the list of newsgroups. However that's the only feature in this area, there's not even a find of any kind. Another obvious feature omission.

Some thought has gone into the GUI layout and I commend the author on this often neglected aspect. However the features are sorely missed and it was painful to navigate and contribute to busy newsgroups with a lack of threading and non sizeable window.

For features FFNews wins, and New York for tidiness – which leaves MicroDot II in between with its settings on the window modes. My advice is to try all of them in their demo forms. You'll find them on the CD in the Magazine directory. It's not just a feature race, it's about what you're comfortable using. My vote goes to FFNews 2 but New York is still a worthwhile effort. ■

Mat Bettinson



▲ **New York has a tidy, some would say minimalist, single window for much of the operations. Shame it's not backed up by the feature list.**

System Requirements:
Internet connection required.

OVERALL
A good quality though basic newsreader.
79%

Supra Express 56

■ Price: £139.95 ■ Developer: Diamond Multimedia ■ Supplier: Active Software © 01325 352260

I liked the way Supra consistently produced high performance modems at a good price with Amiga support, but having been swallowed into the PC peripheral giant, Diamond Multimedia, it remains to be seen if the tradition continues. The SupraExpress 56 is the first 56K modem under review, sporting the K56Flex standard, the competitor to USR's X2 standard.

Faster is better

The new 56K modems perform some magic relying on the fact that telephone lines are digital and so it's possible to detect the individual samples and use the line to the highest degree possible. It's a lot more complex than this but the gist of this is that you must have a digital telephone line all the way to your Internet Service Provider to get a K56Flex 'connect'. In the UK, almost everyone does. The SupraExpress 56 is a small, largely featureless, black box. It has no buttons, no telephone passthrough socket and the serial lead is moulded directly into the back of the unit. These are cost cutting decisions and I miss the older Supra's metallic box, front panel power, telephone passthrough and that famous Supra funky LED matrix status panel. Shame.

You should consider a faster serial port to get the most from these modems. See the reviews of the HiSoft Whippet and the Eyetech Port Plus Jnr. Performance is the crunch and the whole 56K modem situation is overrated. People who achieve real 56K connections are legendary, normally achieving 44K, 46K or if they are very lucky, 48K. Yet the modems are sold as 56K modems.

The Supra delivered consistent 46,000 connects to U-net via our Mercury lines. I flashed our USR Courier's firmware to X2 and it delivered 44,000. On a BT line, the Supra consistently delivered 40,000 and the Courier 44,000. The courier is more expensive and since the Supra (and Courier) can be flash ROM upgraded to the official standard, when it emerges, choosing X2 or K56Flex seems irrelevant. Despite performance gain, I don't like the physical attributes like dim LEDs and lack of passthrough. Thankfully it works fine with STFax. For a first time modem or if you want the small speed improvement now, go for it, but make sure it's supported by your service provider. ■

Mat Bettinson

▲ Now that Supra has been swallowed into Diamond Multimedia, this drab featureless design is what we can expect. Still, it delivers the goods.

System Requirements:

Any Amiga, high speed serial port and digital telephone line recommended.

OVERALL

A good solid performing modem.

84%

Zyxel Omni.net

■ Price: £225 ■ Developer: Zyxel ■ Supplier: PowerMark © 0181 956 7259

ISDN is significantly different from normal modems. Because you need a true digital ISDN line installed, no modem is needed to convert data into sound and vice versa ala the humble modem. Instead all that's needed is an adapter that converts from RS232 serial to the ISDN data stream. These are called Terminal Adapters or TAs for short. The Zyxel 'omni.net' is one such unit, capable of operating at up to 128,000bps if both 'B' channels are used (which costs twice as much).

The Zyxel is a cream unit with a dark green plastic bevel which the LEDs can be seen through. On the back is a connector for a standard ISDN 2 service which is typically a box stuck on the wall when a telecom operator installs the line. There's also a rear mounted on/off switch and two sockets for telephones. ISDN provides two lines, one voice and one data is common and handy. Behaving exactly like a modem, one will have to dig in the manual to set up the TA with the right standards via Hayes style commands. This TA supports virtually every ISDN standard from V120 with built-in V42.bis compression to MultiPPP with STAC compression. From my tests U-net worked with V120 but performance was dire. With MultiPPP, performance was amazing with a full 64,000 connect.

Another advantage with ISDN, when dialling, the result is instant. You connect and log on instantly without any negotiation phase. Using MultiPPP, the normal scripting method of logging into an ISP is bypassed and the PAP/CHAP method, such as provided in Miami, exchanges the username and password automatically. In practice it means you're online in three seconds. Whee!

What can I say, as you'd expect performance is staggering. 64,000 obtains real world downloading rates of well over 7000cps. I've configured the modem for 128,000 dual channel and reaped in data at around the 15K/s mark! Naturally for both rates, we need a fast serial port. I was using a Port Plus Jnr locked at 460,300bps and the results were amazing. Web pages ripped in, mail and news flew along. It was so good they're not getting the Zyxel back. No siree. I love ISDN and though the price has fallen dramatically it's still out of reach for everyone but die hard net heads.

That said, net heads can't afford to be without it and the Zyxel is a superb ISDN TA supporting every standard under the sun. If you're serious about the Internet and you can afford it, get ISDN and get the Zyxel omni.net, you won't regret it. ■

Mat Bettinson

▲ Here's the Zyxel omni.net Terminal Adapter. 64-128K of raw speed.

AMIGA SUPERSTAR

System Requirements:

ISDN service and a high speed serial port.

OVERALL

Brilliant and powerful ISDN TA.

95%

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PD Scene

Cartoons, dinosaurs, galactic empires and fast, beautiful voxel flight games. Andrew Korn views some more gems from the world of PD.

★★★★★	Totally blinding
★★★★☆	Good
★★★☆☆	Average
★★☆☆☆	Substandard
★☆☆☆☆	Oh dear

Firewall

■ Commanche clone

■ Available from: Aminet/game/demo/firewall.lha

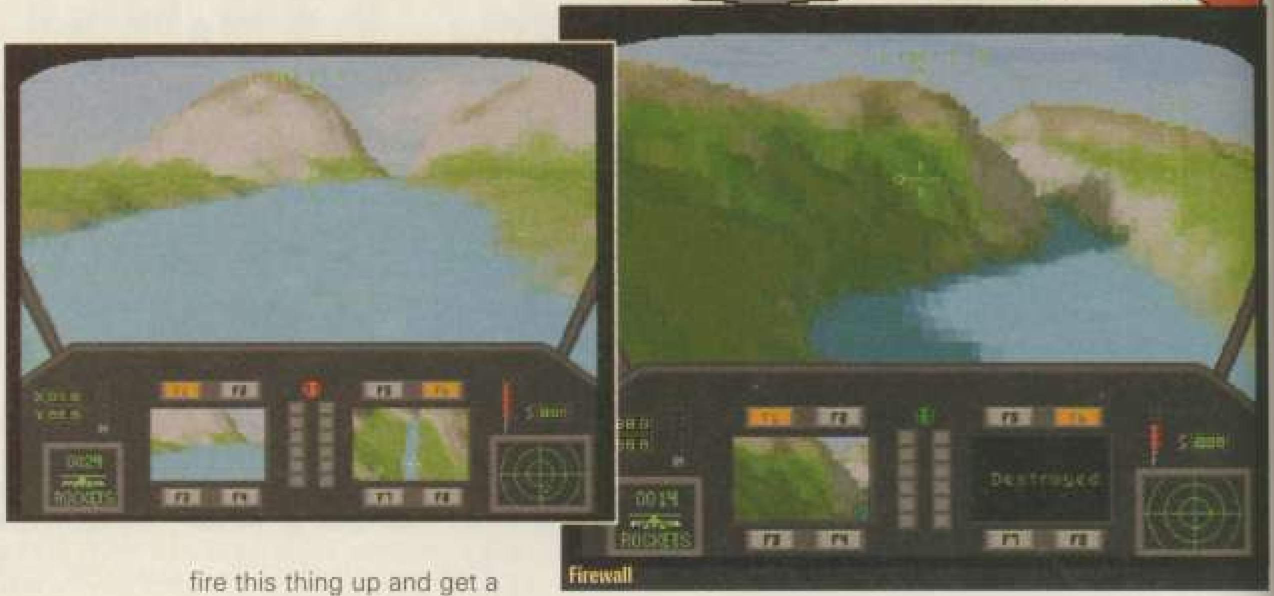
■ Size: 1.6 Mb

Oh alright then, I admit it, ever since I saw Commanche running like the clappers on a 486 at a European Computer Trade Show I've had a real soft spot for voxel engines.

I've played with things like VoxelEngine25 and wondered why no-one ever bothered to attach a game. Probably because doing anything other than a flat fly-past wasn't practical. Sork came along a month or two ago and was the closest thing yet: fast, very pretty, capable of swooping and banking, but prone to crashing. Now we have Firewall. It's fast, pretty and stable. It's got a game too.

Let's be honest about it, the game is rubbish. The assorted fuel dumps, tanks and guns you have to destroy are crudely dumped bitmaps and the tracking of 3D positioning is pretty poor. Trying to shoot things can be frustrating – you move the slightest amount upwards and your missiles head on a ballistic course sunwards instead of ploughing into the ground beneath your feet. None of which matters because there's a blindingly good game engine there and you just know that given a bit of time to work on it there's a fine game in there too.

This is all beside the point. This is in a lot of ways more of a demo than a game. You fire this thing up and get a chance to wonder at what those wacky coders have persuaded your little old Amiga to do this time. ★★★★☆



Firewall

Synthian plasma Ship
attacking
destroyer
Military Action

Galactic Empires – space strategy action

Galactic Empires v1.5

■ Space Strategy Game

■ Available from: PD Power, 15 Lovetot Avenue, Aston, Sheffield, S26 2BQ

■ Tel: 01374 150972.

■ Price: £1 for 2 disks & 75p P&P

It is believed by certain groups of eastern mystics that each person bears within them a single, perfect invention. We can never quite grasp that hidden invention, but we struggle through our lives to achieve it.

For some it may remain a distant heartache of unfulfilled potential, for others though it is a driving force that fuels their lives. An old friend of mine has for years been possessed by the perfect space strategy board game, a bit like Diplomacy, but with lots of extra stuff in it. For years he has been trying to squeeze that game out of his subconscious depths. It seems that Mark Tierno is possessed by the same motivating force, and being less lazy than my acquaintance, he has written this program.

Galactic Empires is one of the types of game that you take one look at and wonder how anyone could have the cheek to release it on any post 8-bit platform, and then go on to deciding that there's actually rather a lot of good stuff in it. Presentation is horrible, with low quality pictures and one of the most grotesque menu systems I have seen since using Word Perfect 5.0 the other day. Mark should get someone in to do a nice GUI front end and pretty graphics sequences, because he's clearly far too busy cramming features into the game and I for one don't think he should stop. GE is a turns based game for two or more players. Each player starts off with a planet in a typically end-of-the-spiral-arm backwater, and has to build up an empire in order to challenge the other players for galactic domination.

There are a whole range of spaceships to build, some that carry troops or cargo, some that are warships or orbiting planetary defence bases. Alternatively money can be used for hiring a privateer fleet to harass enemy shipping, trading with other planets, or sending spies to sabotage, recruit or plant exotic plagues on other planets.

I played this game about long enough to find that throwing everything you have at the enemy in the very first couple of moves leads to total loss of all your forces. Also long enough to determine that if I played this game any longer, I'd get too far into it and never get around to writing this page. If turn based strategy is your thing you are bound to find this an interesting option. ★★★★☆

Maniac Ball

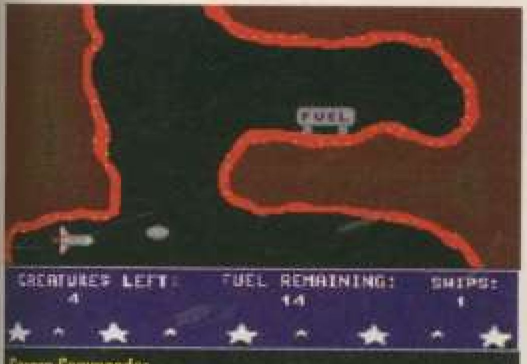
■ Arkanoid clone

■ Available from: Online PD, 1 The Cloisters, Halsall Lane, Formby, Liverpool L37 3PX.

■ Tel: 01704 834335.

■ Price: 75p plus 75p P&P

How can anyone justify another Arkanoid clone? By offering something new, or by



Cavern Commander

Game of the Month...

Captured Dreams (TBL-CD)

■ Demo

■ Available from: Aminet/demo/tg97/tpl-cd.lha

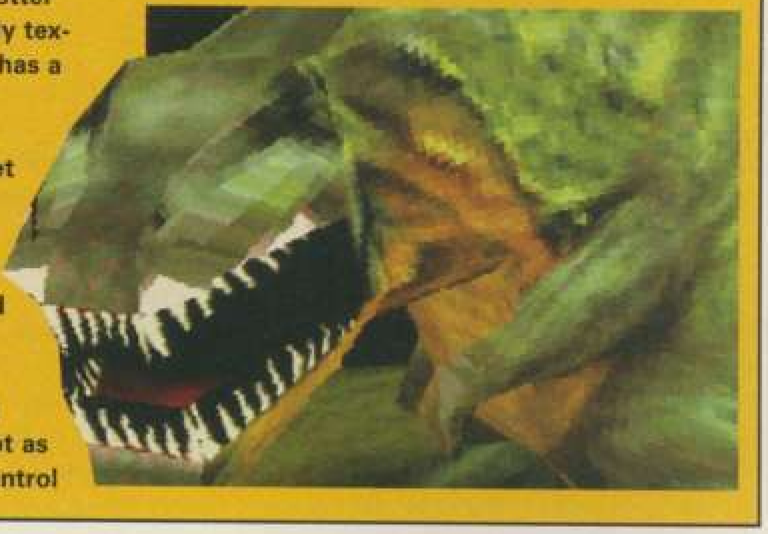
■ Size: 4.5Mb

Demos go in cycles. Someone comes up with an impressive effect, and other coders, being coders, decide that they want to figure out how it was done and do it better. Eventually, someone gets bored. They see some effect – from outside the demo community – or they stumble across some clever programming trick, and come up with something new, something that will really impress the punters. Out that comes and soon everyone is trying to imitate it.

It has been a while now since anyone has tried to offer much beyond better and better light sourced morphing blobs and heavily texture mapped warping tunnels. This one has a fair few of the old favourites, but that dinosaur, now that is something.

If you buy a Sony PlayStation, you get a demo disk with a bunch of playable game demos. Buried in the disk somewhere is an impressive little demo which draws a very nice texture mapped tyrannosaur running along the screen which you can move, spin and cause to roar. In this demo there's also a rotating texture mapped tyrannosaur. Perhaps not as good, and true the fact that you can't control its motion implies that it is not such a heavy piece of code as the PlayStation job, but then this runs fine on AGA and '030s, not the 3D graphics hardware and RISC processors PlayStation programmers have to play with.

Don't get me wrong, there's a lot more to this demo than the dinosaur, which is really just a guest star. It's just that, like Jack Nicholson in Batman, that dino really steals the show. Expect lots of texture mapped sauropods in future demos soon. ★★★★★



doing it so well that no one cares if they already have 40 versions of the same game in their collection. This one attempts it by chucking in all those standard extras such as powerups and exploding bricks, giving you the important and not so common extras such as an editor, then changing the whole fundamental game structure by getting rid of any walls for the ball to bounce off.

Woah there... back up a line. Did I say no walls for the ball to bounce off? What happens when your ball heads off towards the top or sides of the monitor? You gotta get them with your bat too, huh? Yup. Which is probably why you get four bats. That's right, I said four bats. Move the mouse up and down and the two bats at the sides go up and down. Move the bat left and right and the top and bottom bats go left and right.

It all begins to sound like there is something really new and challenging going on here, but where Arkanoid is concerned that's just wishful thinking. The novelty of the four bat system quickly wears off and you find that it's actually pretty similar to play as any other Arkanoid clone. A good one, and definitely a clone that deserves a place in the collection of every Arkanoid fan, but Arkanoid none the less. ★★★☆☆

Charley Cat Quickie 4

■ Cartoon

■ Available from: Roberta Smith PD, 190 Falloden Way, Hampstead Garden Suburb, London NW11 6JE.

■ Tel: 0181 455 1626

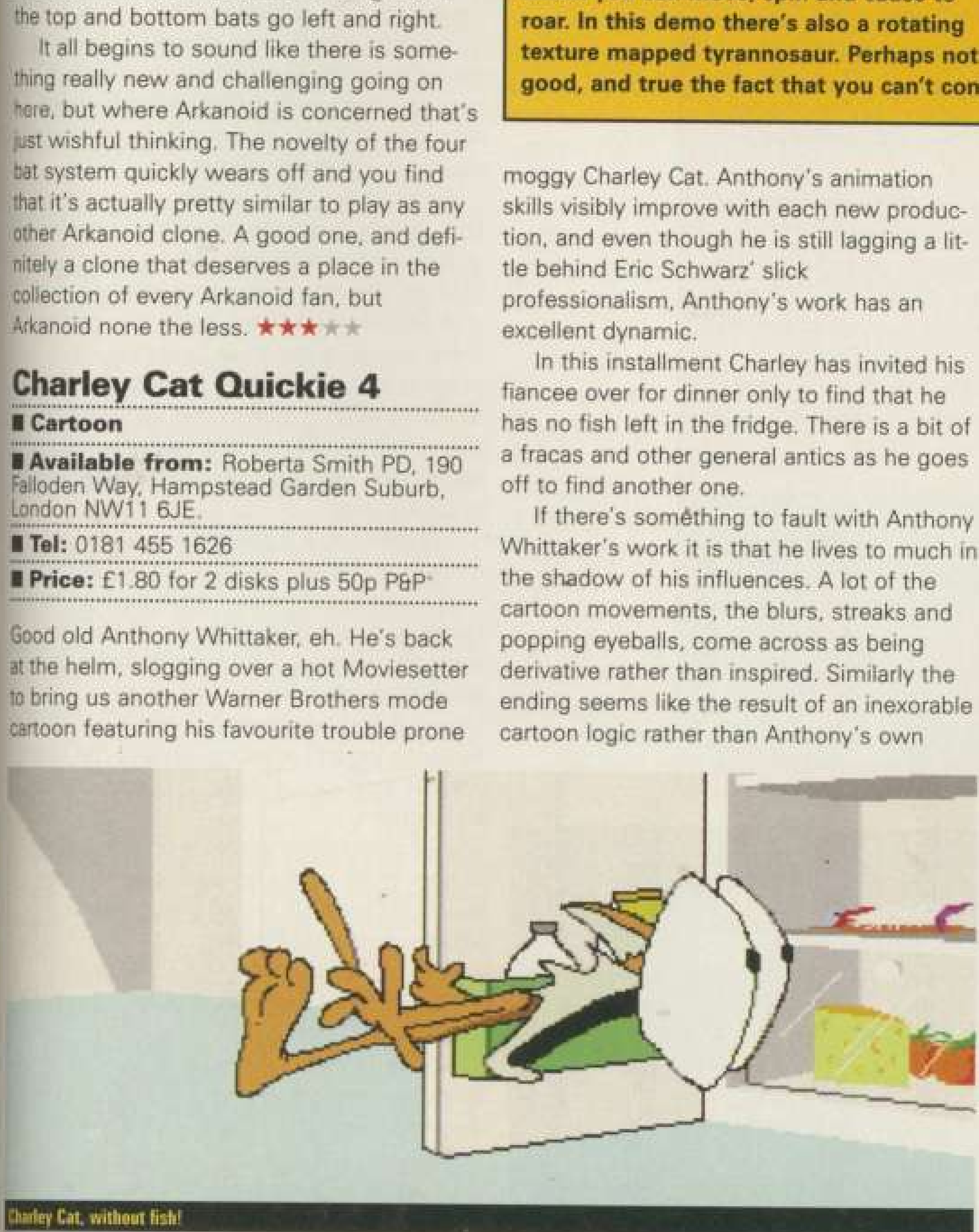
■ Price: £1.80 for 2 disks plus 50p P&P

Good old Anthony Whittaker, eh. He's back at the helm, slogging over a hot Moviesetter to bring us another Warner Brothers mode cartoon featuring his favourite trouble prone moggy Charley Cat. Anthony's animation skills visibly improve with each new production, and even though he is still lagging a little behind Eric Schwarz' slick professionalism, Anthony's work has an excellent dynamic.

In this installment Charley has invited his fiancee over for dinner only to find that he has no fish left in the fridge. There is a bit of a fracas and other general antics as he goes off to find another one.

If there's something to fault with Anthony Whittaker's work it is that he lives to much in the shadow of his influences. A lot of the cartoon movements, the blurs, streaks and popping eyeballs, come across as being derivative rather than inspired. Similarly the ending seems like the result of an inexorable cartoon logic rather than Anthony's own twisted mind. What made Chuck Jones great was that he constantly pushed the envelope. He spoke the language of cartoons, but forced his own deranged doggerel into the vocabulary.

Don't take these criticisms the wrong way, this is a fine short and one that any collector of Amiga cartoons must immediately snap up. I make criticisms only because I can see a much better cartoonist hiding away in there somewhere, just waiting to find his own vocabulary. ★★★★☆



Charley Cat, without fish!

Cavern Commander

■ Oh dear...

■ Available from: PD Power, 15 Lovetot Avenue, Aston, Sheffield, S26 2BQ

■ Tel: 01374 150972.

■ Price: 50p per disk & 75p P&P.

First off you've got this blob. Also there's a cavern. And then there's some other blobs that might possibly be baddies. The cavern scrolls. It's extremely crude to look at and in addition it's unplayable.

I should think that some person probably spent a fair amount of time working on this game and learnt a lot whilst they were doing so... and all that I can say is the best of luck to them. The whole learning process was probably well worth it for them and the experience should therefore be encouraged, but unfortunately not by purchasing this game disk. Is it OK if for me to go home now please? ★☆☆☆☆

PD Utilities

Another selection of utilities are placed under the spotlight by Andrew Korn. Directories, slide shows, graphics handlers... he casts his verdict on the lot.

★★★★★	Totally blinding
★★★★☆	Good
★★★☆☆	Average
★★☆☆☆	Substandard
★☆☆☆☆	Oh dear

Utility of the Month...

SuperViewNG

■ **Type:** Graphics Handler

■ **Available from:** Classic Amiga PD, 11 Deansgate, Radcliffe, Manchester M26 2SH Tel: 0161 723 1638

■ **Price:** £1 plus 75p P&P per order.

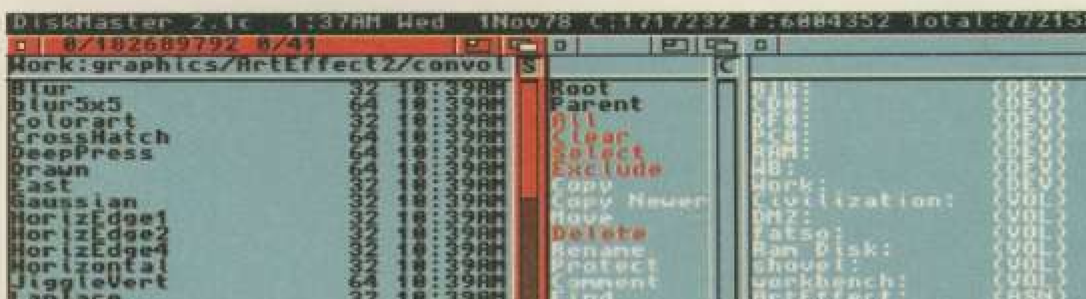
Now this is a serious piece of work. You can tell from the start that you're dealing with more than your average piece of PD when the disk consists of an archive containing 2Mb of data. When you look into the features list and the PowerPC support, you see why the author thinks that being too tight to pay the 30 DM (£10) registration fee is a bit out of order.

SuperView is an image manipulation /conversion/display/screen grabber utility with about a billion features. It may have a nice easy to use GUI front end, but make no mistake, this is a serious power application.

This is an ideal package for people who wish to do a lot of manipulation. The whole idea behind this package is that it's quick and powerful. No huge application to load up, no elaborate front end for doing straightforward tasks. Just a nice simple StormWizard GUI which sits on your Workbench, challenging you to find some obscure file format that it doesn't know.

SuperViewNG is highly modular, based on the SuperView library and a plugins system. Adding new file format readers or new effects operators is just a matter of dumping them in the right directory. The PowerPC support (which will be sold as a plug in) will automatically take advantage of the enormous speed increases PowerPC accelerators will offer.

There just isn't enough space available to go over all the features of SuperViewNG here, so listen to my advice and get the demo to try it for yourself. The demo has naggers and only saves as IFFs, but will give you an extremely good idea of what the package is capable of. Most definitely a must for serious graphics users. ★★★★★


SViewNG - © 1993-97 by Andreas R. Kleinert
Medium
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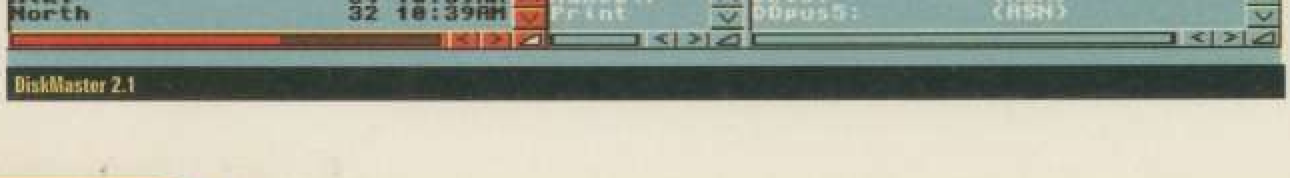

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DiskMaster 2.1c  1:37AM Wed  1Nov78 C:1717232 F:6004352 Total:7721584
0/102689792 0/41
Work:graphics/ArtEffect2/convol
Blur                 32 10:39AM
blur5x5              64 10:39AM
Colorart             32 10:39AM
CrossHatch           64 10:39AM
DeepPress            64 10:39AM
Drawn                64 10:39AM
East                 32 10:39AM
Gaussian             32 10:39AM
HorizEdge1           32 10:39AM
HorizEdge2           32 10:39AM
HorizEdge4           32 10:39AM
Horizontal           32 10:39AM
JiggleVert           64 10:39AM
Laplace              32 10:39AM
LightWax             64 10:39AM
L_To_R_Diagonal      32 10:39AM
Median               32 10:39AM
Nik1                 64 10:39AM
North                32 10:39AM
```

Root
Parent
All
Clear
Select
Exclude
Copy
Copy Newer
Move
Delete
Rename
Protect
Comment
Find
Read
HexRead
ShowPic
MakeDir
Print
RAM: (DEV)
WB: (DEV)
Work: (DEV)
Civilization: (VOL)
DM2: (VOL)
Fatso: (VOL)
Ram Disk: (VOL)
Shovel: (VOL)
workbench: (VOL)
ArtEffect: (ASN)
ArtStudio: (ASN)
C: (ASN)
CLIPS: (ASN)
DEVS: (ASN)
DOpus5: (ASN)

DiskMaster 2.1

DiskMaster 2.1

■ **Type:** Directory Utility

■ **Available from:** PD Power, 15 Lovetot Avenue, Aston, Sheffield, S26 2BQ tel:01374 150972.

■ **Price:** 50p per disk & 75p P&P.

Directory utilities have come a hell of a long way since the likes of CLImate first hit the Amiga, and like CLImate, most directory utilities have now adopted a two window plus button bank style.

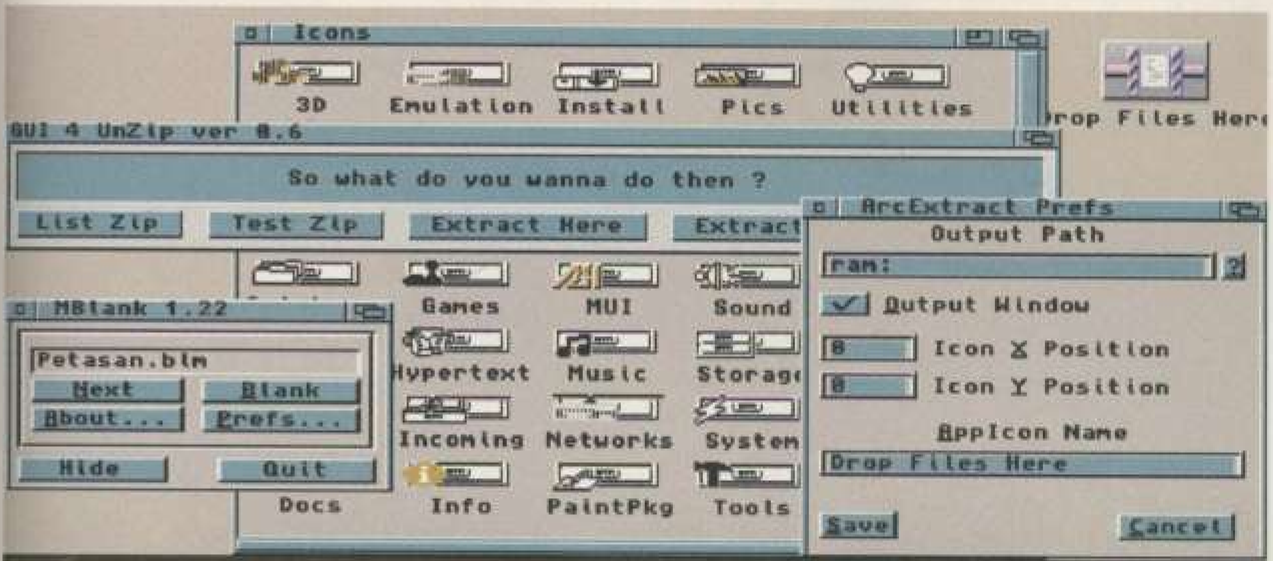
SID, DiskMaster and Directory Opus have all followed this path, until quite recently that is. Directory Opus transformed the genre with DOpus 5.0, moving towards a multiple windows/floating buttons approach, which blends the functionality of Workbench together with the more traditional directory utilities.

As Magellan, its most recent incarnation, DOpus has become entirely capable of replacing Workbench. Whilst the majority of people who have come into contact with Magellan do rate it extremely highly, there are still a bunch of hold-outs who much prefer the old, two lister style of directory utility. I expect that these particularly weird inbreds should be considerably happy with the most up to date incarnation of DiskMaster.

DiskMaster is a power tool. Sure enough, it doesn't support multithreaded multitasking, but what it does have in its favour is a reasonable degree of filetype recognition and a highly configurable button system. Buttons can be simply changed and programmed, and it will do a fantastic job of browsing through the latest Aminet disc, de-archiving files and displaying pictures.

Unfortunately the presentation would appear to be a little bit lacking and it features text gadgets rather than buttons – which could possibly be good in terms of clarity, but it's certainly not something you'd want to keep staring at for long periods of work time.

Nevertheless it will do a lot though, and if you are overcome with a feeling of desperation to escape from the modern era, then this is just one of the ways you can do it without missing out too much on the power stakes. ★★★★☆



Class HD Utils

AGASSM Demo

Type: Slide Show

Available from: Saddle Tramps PD, 1 Lower Mill Close, Goldthorpe, Rotherham, S63 9BY Tel: 01709 888127

Price: 80p plus 50p P&P

You might think AGASSM stands for AGA SlideShow Maker. You would of course be right. Except for the fact that AGASSM works fine on ECS systems as well. Really, if there wasn't enough trouble without people like AGASSM author Paul Vernon striding in and randomly distributing features entirely contrary to the acronym.

AGASSM is driven from a nice GUI front end. It sequences a side show from a series of objects, which may be graphics, animations, sounds, mods or even ARexx scripts. A collection of wipes is provided, and each one is selected by clicking on the appropriate Icon. Even producing quite complicated side shows with AGASSM is actually alot easier than you'd think.

The program even does a good job of filetype recognition, offering only the appropriate choices to you when you select an object. The potential of the ARexx port is intriguing. The obvious possibilities this offers is to extend its current level of functionality. You could, for example, include an ARexx script which sent a Midi XG mod to a Project XG if you wanted really top level sound output on a Project XG equipped Amiga.

The one thing which I found disappointing about this program is that there's no support of alternative filetypes. Samples, pics, anims, are all IFF only. True, it is advantageous for a slide show to have the data in a form which is quick to display, but it would be nice if this package supported a few industry standard formats such as jpg and png graphics, AVI and QT animations and WAV samples.

The demo gives you a good idea of what is in store, but if you are after a decent slide show maker, then it's better to save yourself the bother, and just go straight for the full version instead. It works out more expensive, at only a couple of pounds extra. ★★★★☆

Class HD Utils 22

Type: Utilities Assortment

Available from: Classic Amiga PD, 11 Deansgate, Radcliffe, Manchester M26 2SH Tel: 0161 723 1638

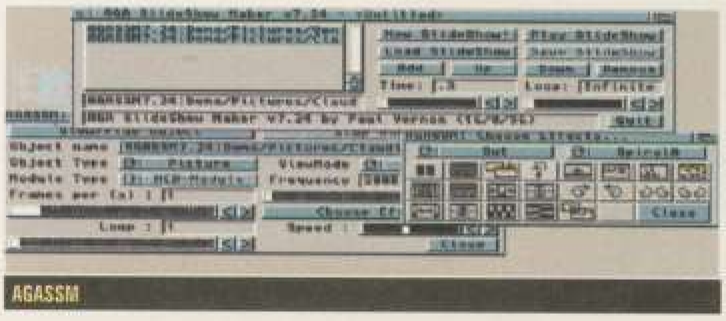
Price: £1 plus 75p P&P per order.

Those wacky chaps from Classic PD are at it again, churning out disks crammed with little utilities. Less earthshaking is a poetry template for FinalWriter, a random Workbench backdrop selector, a Workbench version checker which checks MUI versions too, and screen blanker which fades nicely etc. In the middleweight category, is a file viewer – basic but pretty small – that's useful for people after a small executable for crowded floppies.

The two most interesting packages are ArcExtract and Gui 4 Unzip – de-archiving utilities. ZIP is the standard archiving utility on the PC, and whilst not as efficient as lzx, it's very common. There's been Amiga versions of ZIP available for a while, and it's essential for anyone likely to move files cross-platform to have. Gui 4 Unzip is a simple script using requestchoice and requestfile to handle the cli interface for the unzip command also provided. ArcExtract is a more sophisticated unarchiving utility.

It is an app icon which sits on your Workbench waiting for files to drop on it, unarchiving anything you feed it to a specified directory. ArcExtract only unarcs ZIPs to the directory they're loaded from which is a pain, but then GUI 4 ZIP does a great job of zips – all mouse driven – with selectable destinations, ZIP contents listing and file integrity checking.

Yet another quality bundle of utils from the Classic guys. ★★★☆☆



AGASSM

Best of Aminet

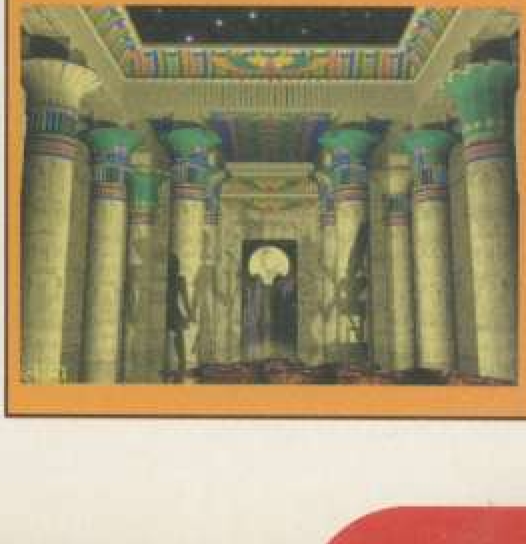
The Aminet wasn't so active this month. Is interest in the Amiga freely distributable software waning at last? Hardly. What actually happened is the Aminet filled up. Wuarchive, the Aminet's home, is back on line on a 110 Gb RAID server. Lots of uploads disappeared whilst this happened, but there was still plenty to see, do and download.

If you have been using our DirOpus coverdisk, or upgraded to a newer version, you really should mosey on down to biz/dopus. Notable new arrivals in that neck 'o the woods include biz/dopus/bZ_Filetypes.lha (14k) which has a whole bunch of filetype extensions. If you are on DirOpus 4, you'll still find things in there of use, like recent re-upload, biz/dopus/VCopy4xx.lha (10k), a version checking copy command.

Want to network a couple of Amigas together? Can't wait for the next CU Amiga DIY article? comm/net/diskserial.lha (20k) may be just what you're after. This archive contains a device driver and the hardware schematics for a nippy little 30Kb/s pseudo serial link via the floppy disk port. Don't get too excited about fast modem connections, this isn't a true serial connector, but should make an excellent alternative to sernet.

Check out RTUtils at utils/cli/rtutils.lha (7k), a couple of CLI commands which use the treqtools library. RtEZreq is a command which replaces the standard requestchoice command, and rtgetstring string returning function. Very nice. Something for the less advanced user? Peter Hutchison's guide to hard drives could come in pretty handy at docs/help/hardDrive.lha (8k).

As always the Aminet provides fun as well as usefulness. Regular readers should have picked up on my liking for voxel engines. Latest example to check is Alastair Robinson's effort at game/demo/AMRVoxel.lha (504k). This one is an attempt at a voxel driving game. It's in its early stages yet, but well worth the download. This month's pic of the month is Davide Bigazzi's rendered version of Robert's painting of the temple of Karnak, which can be found at pix/trace/philae.lha (373k).



Why Apple?

One day we all hope to see the rebirth of the Amiga with a PowerPC processor and other new features to enable it to compete again with today's systems. Sadly though, more than 2 years since Commodore's demise, little of substance has actually happened. We've seen prototypes and heard promises... we all hope to see new Amiga developments.

If you can't wait and need more performance today, without paying the earth - there's only one real alternative to consider... There's never been a better time to think Apple!

Only Apple offer you both desktop and portable computers that truly match the ease of use the Amiga brought to your desktop. Affordable Apple Macintosh systems have PowerPC RISC processors with thousands of off-the-shelf programs available in areas where the Amiga was always previously so strong.

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PM8600	200	604e	32	2.0Gb	✓	✓12	✗	✗	✗	✗	✗	Extended	£2407	✗
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3400c/180 16/1300, AM	£2936
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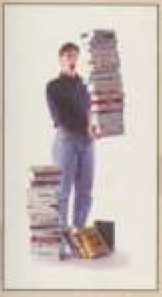
Why Macintosh?

Performance:

All Macs are PowerPC based. Even entry level desktop systems run at 160MHz or 180MHz, with 275MHz powerhouses and 200 MHz multi-processor systems at the top of the range. Even portables offer 240MHz!

Apple is the only mainstream computer company who has been able to make the transition from the older CISC (complex instruction set computing) processors to the newer and faster RISC (reduced instruction set computing) processor technology - whilst still retaining full backward compatibility with previous software.

Remember 486, Pentium/Pro & 680X0 are merely CISC!



Software choice:

Over 1,800 native software packages (written specially for PowerPC Processor Macs) have been shipped since Power Macs were launched in 1994 - plus there are thousands of existing programs which can also be used. Industry standard programs such as Word, Pagestream, Word Perfect, Page FileMaker Pro, Excel, Quark Xpress, Photoshop and many others have all been developed for the Mac.

Creativity:

- Macintosh still dominates the creative world with an 80% market share in colour publishing.
- 65% of post-production video editing is on Macs.
- Macintosh is the most widely used system for the creation of Internet web pages.
- Most magazines (probably the one you're reading right now) are created on Macintosh.

Multimedia:

- Apple is the World's No. 1 Multimedia PC vendor.
- All desktop Macs have a fast CD-ROM drive as standard (many portables have internal CDs too).
- In 1995, 42 of the top 50 selling CD-ROM titles worldwide were developed on the Macintosh.
- Many Macintoshes have built-in TV with teletext so TV clips can be recorded directly to disk as QuickTime movies.
- Many Macintoshes have built-in video in and out, for direct recording to VCRs.
- Several Macintoshes have internal digital video editing facilities as standard and many others can be upgraded to include this facility with ease.

The Internet & Communication:

- All Macs are Internet ready; many include a 28.8 or 33.6 modem with full send/receive fax and answerphone management facilities.
- Industry standard web browsers, Netscape Navigator and Microsoft Internet Explorer, were developed for the Mac. Both give full access to all Web sites with new Internet page layout features like auto-tables and on-screen movies.
- The Internet's standard format for video files, called QuickTime, or QuickTime for Windows, are both Apple products. Of course QuickTime comes as standard with every Mac.

Connectivity & Expandability:

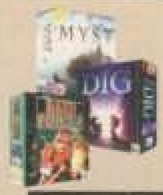
- All Macintoshes have networking built in as standard, so connecting systems together and adding shared printers etc. couldn't be easier.
- All Macintoshes have an external SCSI connector as standard - adding external drives, cartridge drives, scanners etc. really is Plug-and-Play.
- Low-cost digital cameras can be plugged into the Mac for instant real image input.
- Inexpensive industry standard PCI cards can be used in all desktop Mac systems.

Education & Edutainment:

- Many quality Macintosh titles are widely available. Dorling Kindersley offer superb titles like The Ultimate Human Body and History of the World whilst Microsoft publish Encarta, Cinemania and Dinosaurs.
- Because Macintosh is the preferred system within many educational establishments, high quality software is assured.

Recreation & Games:

- Top games like The Ultimate Doom, Myst, Rebel Assault II, Dark Forces, Descent, Afterlife, Lost Eden, Legend of Kyrandia, Full Throttle and The Dig have all been developed for Macintosh.



Output & Presentation:

- Connecting and using colour printers (from Epson, HP, Apple and others) to Macs is so easy and the results are truly outstanding.
- Many software packages are available offering image manipulation and superb photo quality output.

PERIPHERALS

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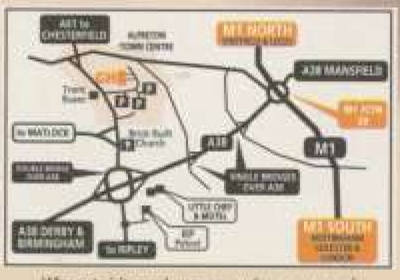

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Gordon Harwood Computers was founded as a specialist Commodore dealer in 1982 and we're still supporting Amiga users today. We began supplying Macintosh systems in 1991 when it became clear that Commodore was failing to capitalise on the technological advantage it had. We needed to have products available that fulfilled the needs of our customers who were demanding...

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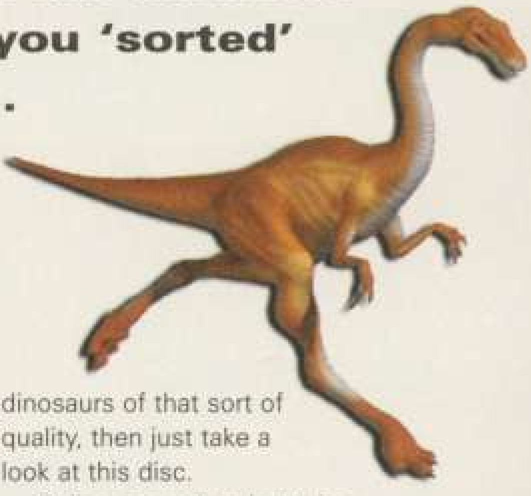
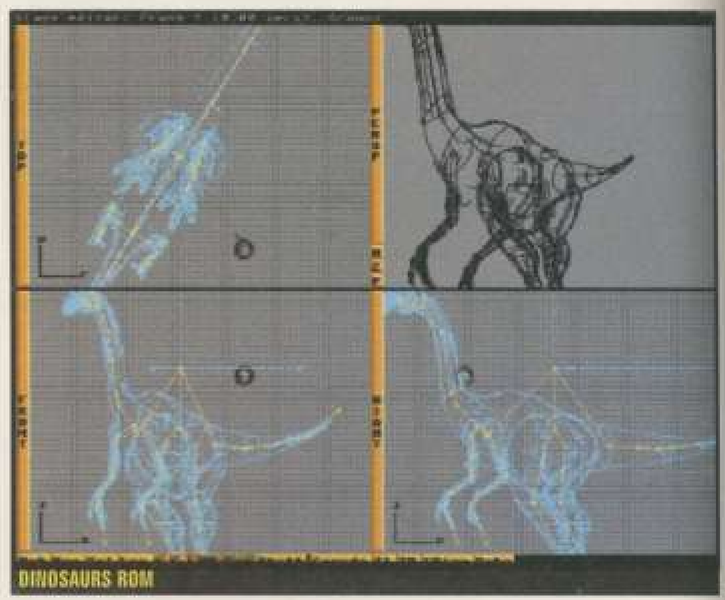
CD-ROM Scene

A round-up of some of the choicest discs about for all of you 'sorted' CD-ROM drive owners.





DINOSAURS ROM

Dinosaurs ROM

- **Available from:** Power Computing, Unit 82a Singer Way, Kempston MK42 7PU.
- **Tel:** 01234 851500
- **Price:** £99 + £2.50 P&P

A topical release this, given the current success of the pretty – but vacuous – Lost World, the follow up to Spielberg's mega hit Jurassic Park. The effects wizards at Industrial Light and Magic are as ever the stars of these two blockbuster movies, their CGI dinosaurs entirely making up for the utterly abysmal plot and acting.

Amigas were apparently used in the design stages of these models, and if you doubt for a single moment that an Amiga would be capable of producing CGI dinosaurs of that sort of quality, then just take a look at this disc.

Believe me when I say the stakes in this field are very high indeed. The standards ILM set in Lost World and Jurassic Park have lead people to expect seriously life like dinosaurs with accurate textures, good movement and fluidly organic shapes. Taking a look at the price of this CD, you'll see that this is very much a tool for the professional user, and if you are trying to make a living, you're going to want models which are good enough to stand up to the high expectations set by the Spielberg movies. Fortunately the models on this CD are really pretty good.

The disc has 10 models on it: A tyrannosaur, a gallimimis, pterodactyl, parasaurolophus, triceratops, brachiasaurus, plesiosaurus, a veloceraptor, and – off species if not exactly off topic – a shark and a mosquito. The models all come with bump maps, colour maps, and specular maps. They all have bones to facilitate animation and inverse kinetics features.

The models are in three formats, Imagine, Lightwave and 3D studio (no, this isn't an Amiga package, this is a multi format disc). Rather disappointingly the Imagine models seem to have been designed with Imagine for Windows users rather more in mind than Amiga Imagine users, as the Brushes are all in Targa format. However, it should be perfectly possible for someone to copy the models to their hard drive, then assign the path where the model will look for its attribute files and convert the brushes to IFF.

The Lightwave models have brush maps in IFF and Targa format already. Lightwave doesn't have such rigid path setting commands built into the objects as Imagine, which is why it's possible for them to do this. For Imagine they would have had to repeat the model sets for IFW and Amiga Imagine versions. This would have cost in the region of another 120Mb or so, which would have meant dropping something else from the disc, so the exclusion of this is perfectly understandable.

There are a lot of extras on the CD. As well as the main formats, the models are also to be found in VRML and AutoCAD formats. There is a nice collection of sample pictures to show you the kinds of things that can be done with the models, and short ani-

Amy Resource – European Edition Vol.1

- **Available from: Weird Science, Q Troon Way Business Park, Humberstone Lane, Leicester LE4 9HA**
- **Tel: 0116 246 3800**
- **Price: £19.95 plus £1 P&P**

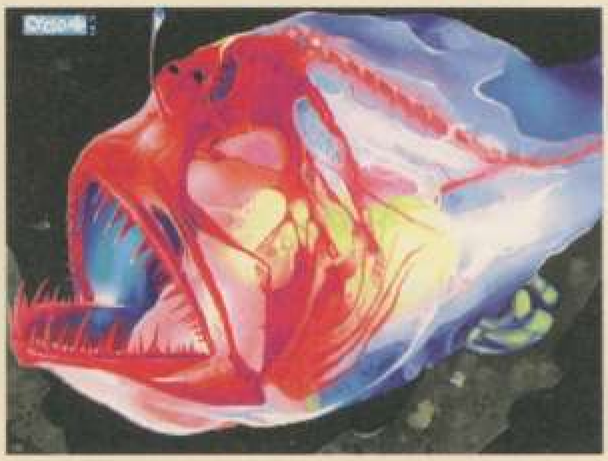
AMIGA SUPERSTAR

Ho hum, yet another CD collection. There are enough of these on the covers of mags, why pay twenty quid for another one? Well if it's as good as this, that's reason enough! This first European Edition brings to a wider audience the Italian Amy Resource discs, clearly a top notch collection. This disc just oozes care and attention to detail, down to the specially provided Eric Schwarz covers and the reproduction of the cover image on the CD itself.

The contents of the disc are along the lines of most other similar collections. There is are directories of pictures, games, demos, important tools and so on. A fair bit of attention has been paid to making everything work nicely from Workbench, the picture directories being a notable example. Each directory is accompanied by a picview file, which allows you to view a catalogue of the directory's contents and view from there. As well as having all the standard click to activate stuff there are also some rather hefty directories of archived software which you click to de-archive.

Perhaps the most impressive part of the disc is the commercial and registered software. You will find demo versions of PPaint 7.1, Turbocalc 4, Drawstudio, PCTask, Sixth Sense, Storm C, Storm Wizard, and a bunch more. A good collection, although you'll probably already have a few. On the other hand, the fully registered versions of Amiga E 3.2I, Image Studio 2.3, WebPlug 1.22, ProgEd2.4, FontMachine 1.05 and BackMan 1.4 is a rare and excellent bonus indeed.

As with all such collections, one overriding issue is how much of the software on the disc you already have. This is not a cheap collection, but you do get a lot for your money. The registered shareware is a quality collection and one that you'd have to work at to get from other sources. Ultimately if all the software I've mentioned doesn't interest you and you collect all the Aminet discs, there's not a lot to offer, but this is a brilliant example of its type. Top marks to Luca Danelon of Interactive for a top CD. 92%



mations of each model in FLC, AVI and QT formats to show how well they can move. The models even come in low polygon variants for users with less memory to spare. There is no doubt that you're unlikely to fork out a tonne on this CD unless you are pretty serious about your animations.

You'll probably be happier with the money spent if you are a Lightwave user than an Imagine user, as the Lightwave models have a clear edge, most notably on the bones structure. Overall this is a very professional production, with good models and a very professional price. **88%**

Aminet Set 5

■ **Available from: Weird Science, Q Troon Way Business Park, Humberstone Lane, Leicester LE4 9HA**

■ **Tel: 0116 246 3800**

■ **Price: £34.99 plus £1 P&P.**

Here we go again, another Aminet Set, another CU Amiga screenstar. This collection contains 4 CDs of LHA archives, covering the software uploads to the world's largest etc, over the past few months. There is about a gigabyte of data on these discs which will never be on the regular Aminet CDs, and you get OctaMED Sound Studio, a great bonus if you didn't get our March issue when we gave it away, plus AmiAtlas and CanDo 2.5.

The collection of uploads includes around 4 gigabytes of software in around 7,500 archives. Check the table to see the breakdown. The discs, as usual, are well arranged with the now traditional Aminet front end. You can search for whatever you are looking for, you can browse your way through the discs, and when you click on an archive, it will either unarchive or play, whichever you like.

The contents of this CD, as you would expect, contains everything from the utterly dire to the truly wonderful. There is some of pretty much everything, but with this amount of data, what else do you expect? The ultimate CD collection. Once again. 94%

Aminet Set 5 contents

biz	84Mb	misc	59Mb	demo	813Mb
dev	115Mb	text	46Mb	game	273Mb
disk	19Mb	util	75Mb	comm	100Mb
docs	88Mb	gfx	151Mb	mods	801Mb
hard	9Mb	pix	941Mb	mus	43Mb

DEM ROM

■ **Available from:** Weird Science, Q Troon Way Business Park, Humberstone Lane, Leicester LE4 9HA

■ **Tel:** 0116 246 3800

■ **Price:** £9.99 plus £1 P&P.

OK, so we gave you Vista Pro last month. We gave you a bunch of DEMs. But where can you get hold of some more? Here is the simple answer. This CD-ROM from Graphic Detail is currently being knocked out by Weird Science at a very nice price.

There are over a 1000 DEM files on this disc and each of these are topographical models of a part of North America. The DEM (or Digital Elevation Model) standard was developed by the US Geological Survey team to present a form of mapping system which would record full 3D data of a landscape. It simply works by dividing up a plot of land into a grid and then recording the height of each element in the grid.

The information can be stored in ASCII format and reproduced by a computer. DEMs such as these can be read by Vista Pro, Scenery Animator, and also by certain versions of Lightwave.

The models on offer are mostly about a megabyte in size, offering 1000 by 1000 pixel resolutions. These ultra high resolution models are well worth getting your hands on for the amount of extra polygon data produced by your rendering package, but often the scale of the landscapes is so large you find that they appear very flat. This is because the areas covered are so large, that even tall mountains are a little short in comparison. You can get in close, but this means you are losing a lot of the resolution gain, or you can sneakily raise the vertical scale tenfold or so at the expense of realism.

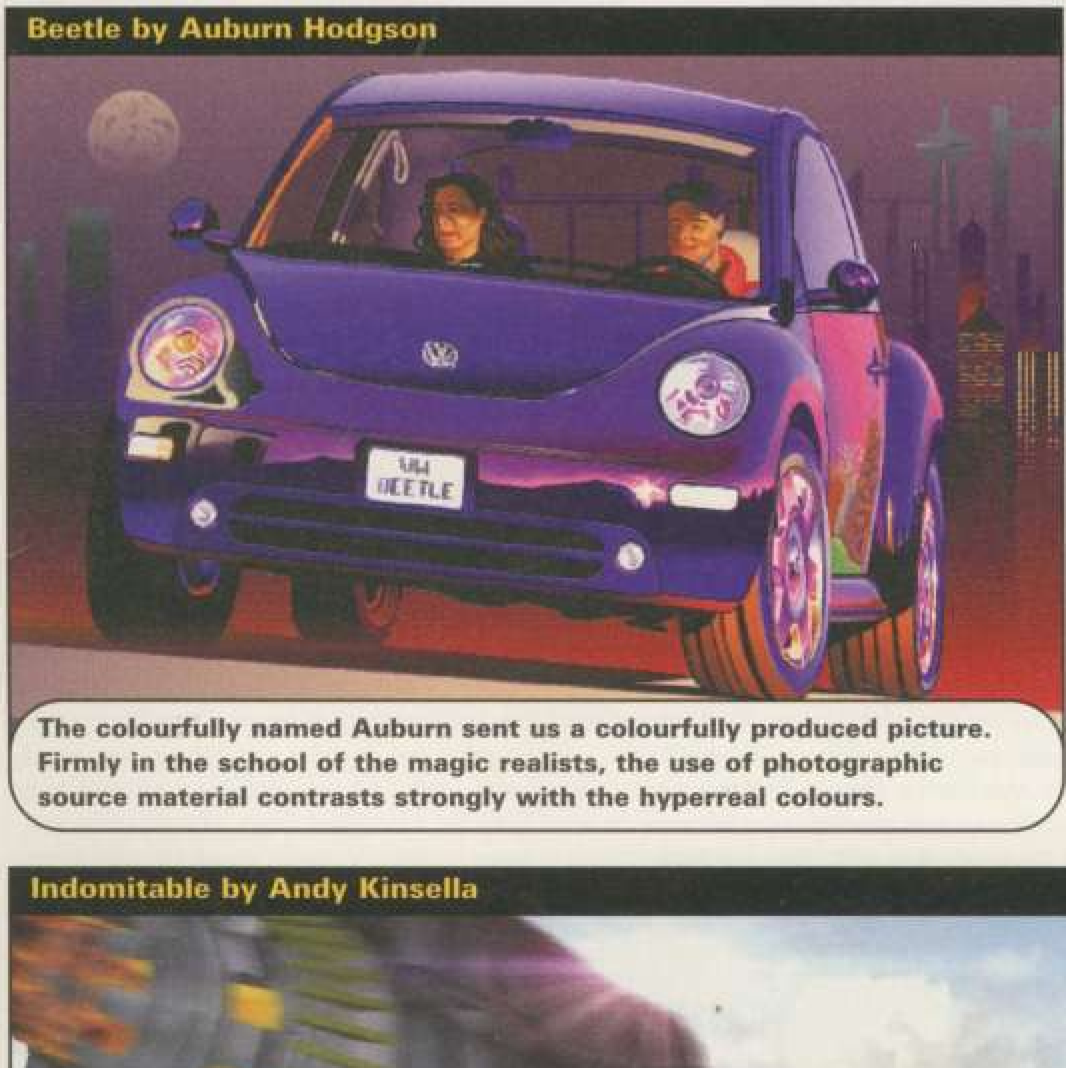
You should ask yourself what you need this disc for if you are planning on buying it. These DEMs do look more natural than one you generate randomly, and if you want to do renders of bits of the US you can't go wrong. I can't help feeling though that it would seem a lot more interesting and better value for money if there was a better range of DEMs, as some maps of the Himalayas or Mars would surely be better than a flattish DEM of some corner of Delaware. However at this cost, you can't complain too much. **84%**

DEM ROM

Art Gallery

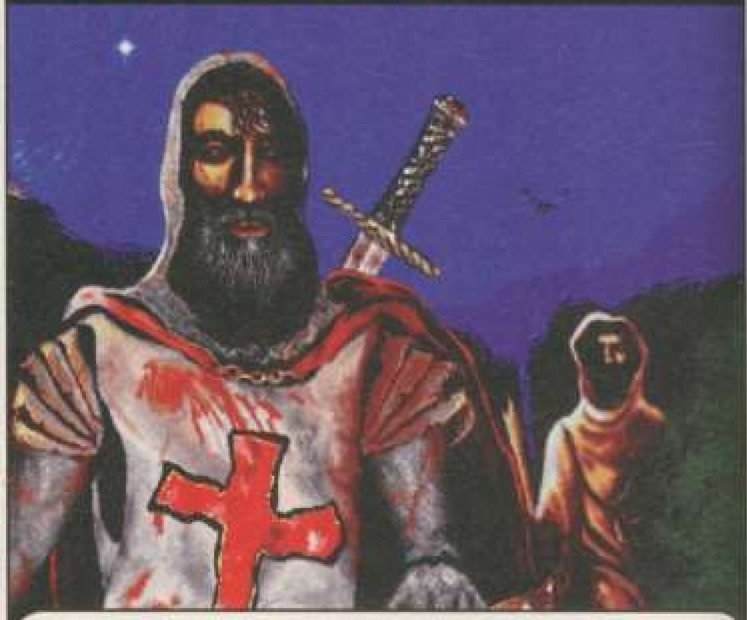
Send pictures to: Art Gallery, CU Amiga, 37-39 Millharbour, Isle of Dogs, London E14 9TZ or E-mail them to artgal@cu-amiga.co.uk.

Beetle by Auburn Hodgson



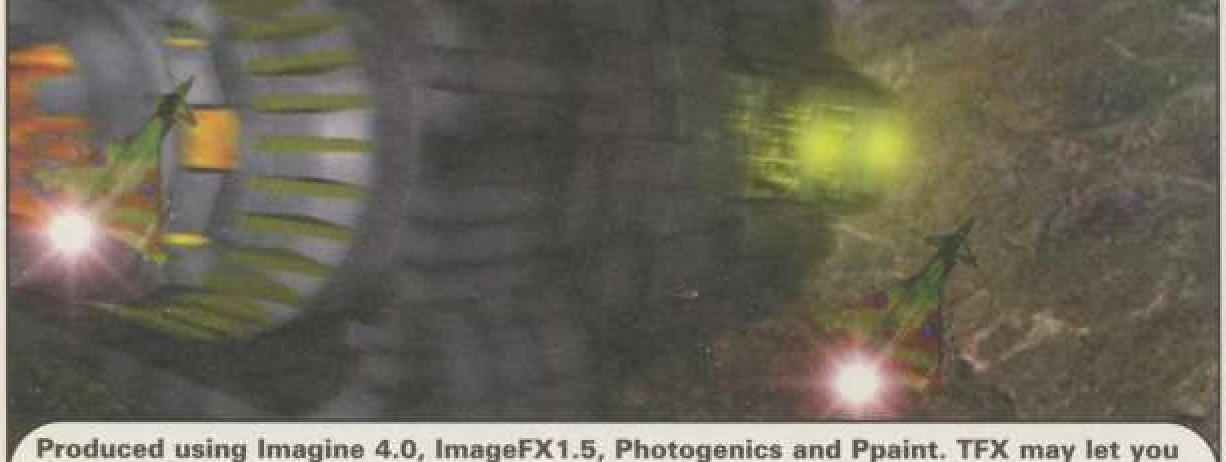
The colourfully named Auburn sent us a colourfully produced picture. Firmly in the school of the magic realists, the use of photographic source material contrasts strongly with the hyperreal colours.

Crusader by John Lowther



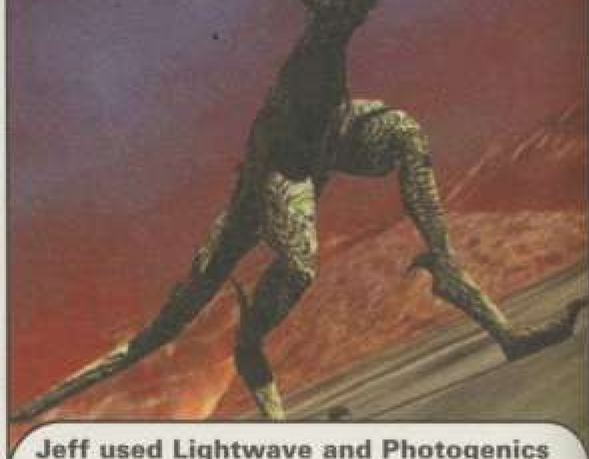
A hand drawn image of a crusading knight, drawn with Dpaint4, Ppaint and Brilliance2. The blood-splattered surplice, distant fire and carrion birds belie the traditional image of a Christian Knight.

Indomitable by Andy Kinsella



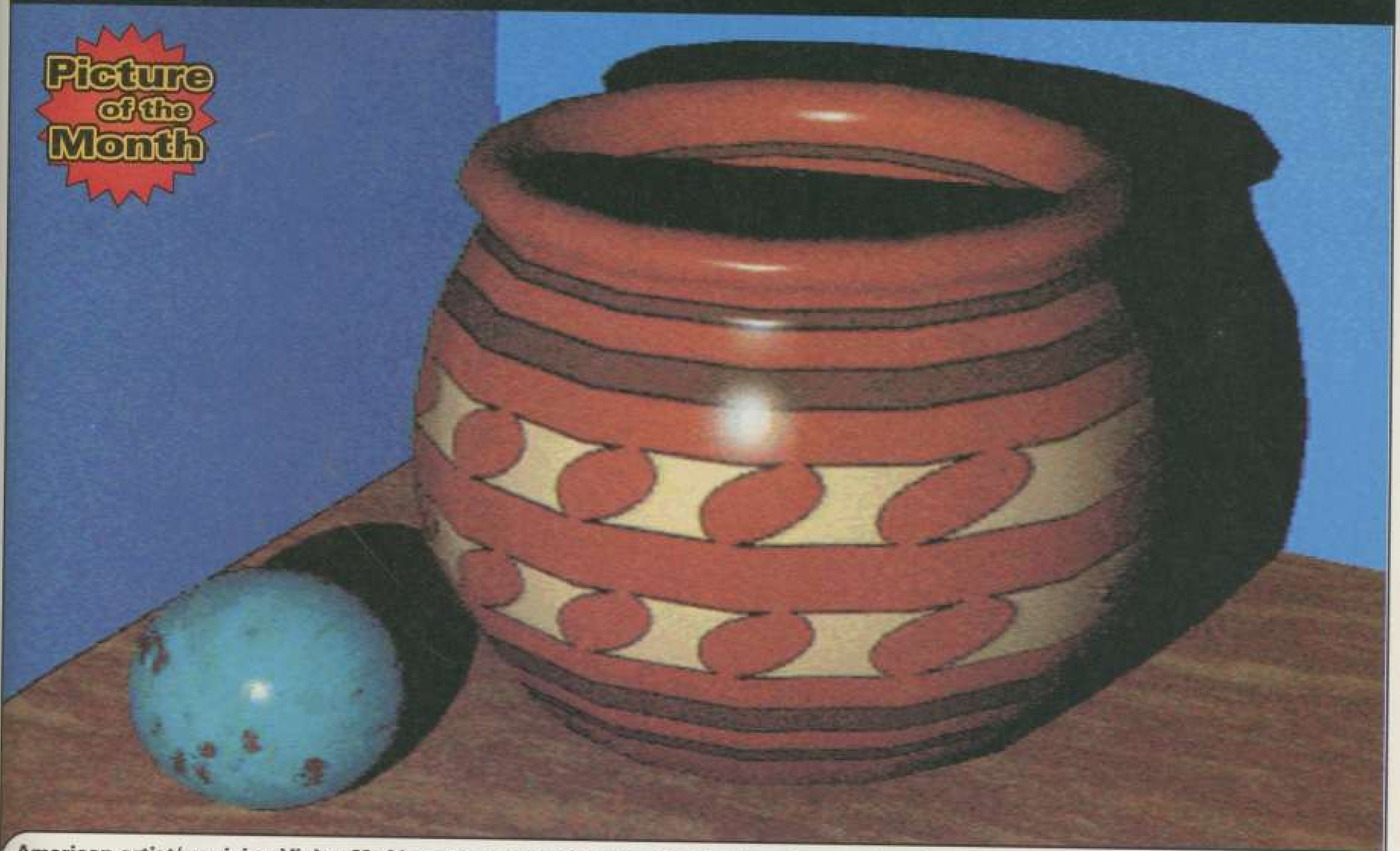
Produced using Imagine 4.0, ImageFX1.5, Photogenics and Ppaint. TFX may let you fly EF 2000s but it doesn't have enemies like this! The blur effect on the spaceship works very well.

Psilarq by Jeff Ranasinghe



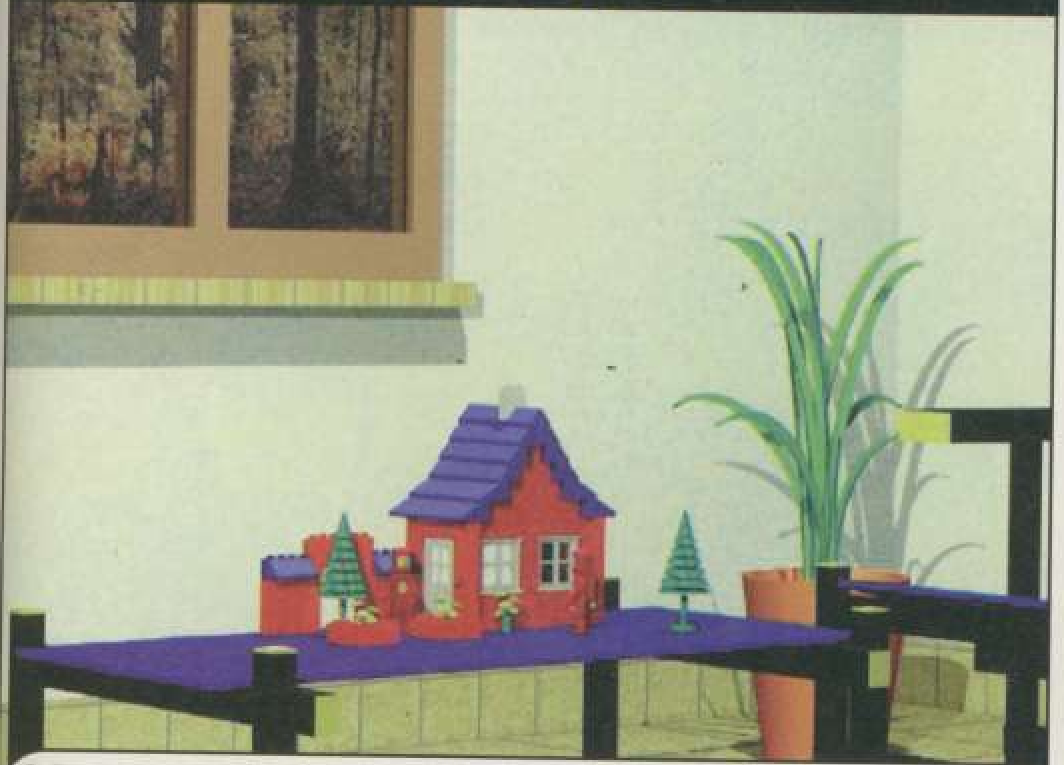
Jeff used Lightwave and Photogenics to produce this H.R. Giger influenced image. A very cinematic composition.

Pueblo Bowl by Vivian McAlexander



American artist/musician Vivian McAlexander produced this excellent Imagine render of a piece of American Indian pottery with hand drawn brush maps produced in Dpaint. Minimalist but showing Vivian's excellent colour sense.

House in Livingroom by Jeroen Hooyschuur.

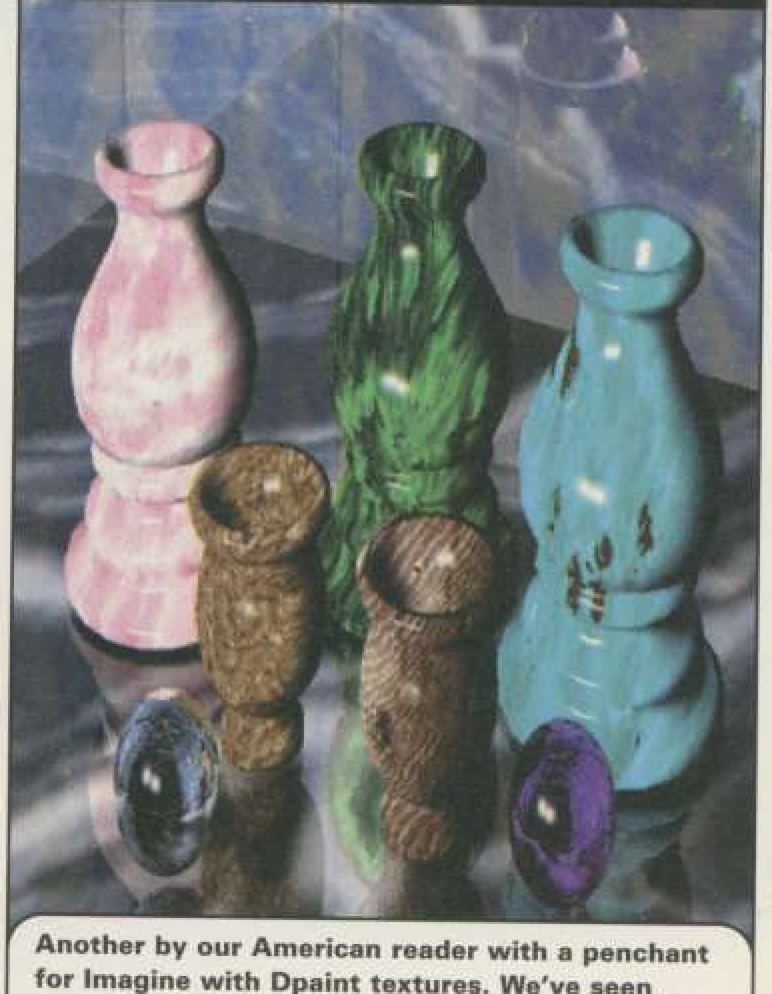


A Real 3D render with Ppaint and ImageStudio for post effects. An amusing juxtaposition of the lego house with the house containing it. The Lego – like De Stijl chair is a great touch.

Picture formats

Most contributions to Art Gallery can be found on the CUCD. Please avoid sending JPEGs if possible. IFF, GIF or PNG give best results.

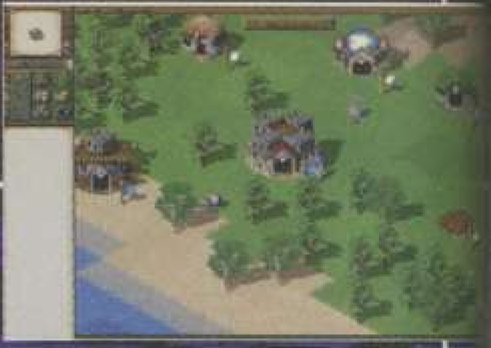
Vases by Vivian McAlexander



Another by our American reader with a penchant for Imagine with Dpaint textures. We've seen textured vases many times but these hand drawn textures make this one stand out.

SADENESS

Coming Soon from Sadeness Software, the ultimate Amiga CDROM games!



Incredibly detailed H-Res graphic

FOUNDATION

The Ultimate Amiga Strategy Wargame!

Due for release in November 1997. **Foundation** will set new standards for the Real-Time strategy war/conquest games! Featuring many unique features not seen in any game for any platform!

Combining the very best elements of **The Settlers 2, Warcraft 2, Command and Conquor, Megalomania** along with some totally original ideas and features - **Foundation** will set new standards for strategy games on all computers.

Brief Feature List:

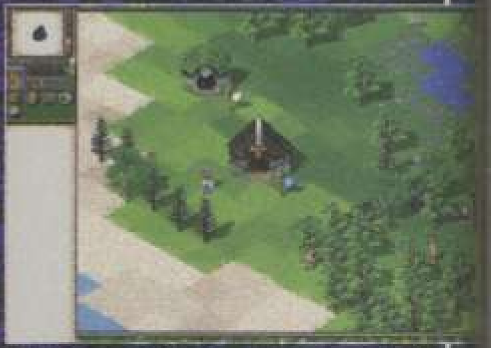
- ECS, AGA and CyberGFX fully supported.
- 1 player versus 1, 2 or 3 computer controlled players.
- over 800 frames rendered intro
- Full control over every friendly unit
- Random level generator for intinite levels!
- Custom made 24bit quality mission/menu screens.
- Advanced enemy Artificial intelligence.
- Realistic rendered objects such as trees, rocks etc.
- Serial and TCP/IP links planned
- 2 player Split-Screen mode.
- Over 50 meg of Sound and Graphics.
- Comes with a Map/Mission editor.
- Extensive full-colour on-line manual/help.
- Mug-Shots included from Amiga owners!
- Advanced Fire/Smoke/Shadow effects.
- High-Res graphics-absolutely amazing!

If you would like to be one of the very first owners of this massive new Amiga game, you can fill in the pre-order form below **(NOTE: No money will be debited until your order is sent!)**. This will ensure that your order is despatched on the very day of release!

Release Date: November 1997 • £29.95 inc p&p • http:/WWW.sadeness.demon.co.uk/foundation.html

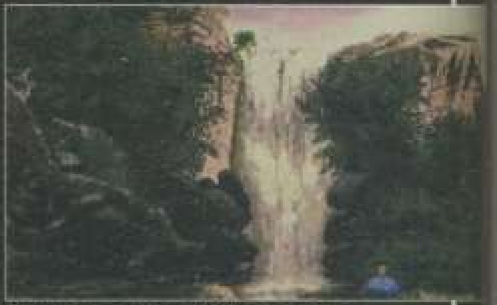
SYSTEM REQUIREMENTS: Any Amiga - 2 Meg RAM minimum Double-speed CDROM, AGA and Graphics cards fully supported and enhanced

Stunning 24bit intro/menu screens!



Full battle and management control!

ONESCAPEE



Full 256 colour AGA graphics

Due for release in October 1997. **onEscapee** will set new standards for Action/adventure games!

Combining the very best elements of classic games as **Prince of Persia, Another World** and **Flashback** along with some totally original ideas and features - **onEscapee** will set new standards for action/adventure games games on all computers (PC and Amiga versions under development).

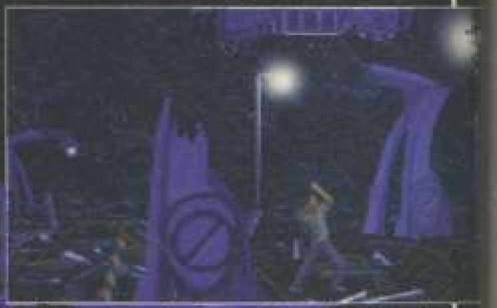
Brief Feature list:

- AGA required and CyberGFX support planned.
- 5 minute long, atmospheric 9meg Intro!
- 100% multi-tasking system friendly.
- Incredible, atmospheric digital music score!
- Cave, City, Underwater and space levels + more!
- Control choice of Keyboard, Joystick or Joypad.
- A great variety of different enemies - with intelligence.
- 4 years in development by a large team!
- 100% pure assembly language
- Thousands of hand-drawn animation frames!
- Can be used on Double-scanned screens.
- Complex animations are custom-rendered!
- Logical puzzles
- Full use of AGA chipset - using 256 colours.
- Rippling water, sweeping light beams etc.
- Amazing film-quality cut-scenes!

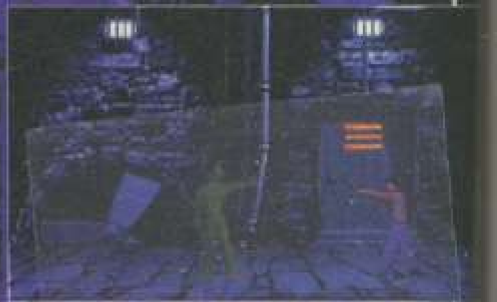
If you would like to be one of the very first owners of this massive new Amiga game, you can fill in the pre-order from below **(NOTE: No money will be debited until your order is sent!)**. This will ensure that your order is despatched on the very day of release!

Release Date: October 1997 • £29.95 inc p&p • http:/www.sadeness.demon.co.uk/foundation.html

SYSTEM REQUIREMENTS: Any Amiga - 4 Meg RAM minimum. Double-speed CDROM or better. Graphics card support planned for the future.



600+ frames of character animation!



Full atmospheric digital music score!

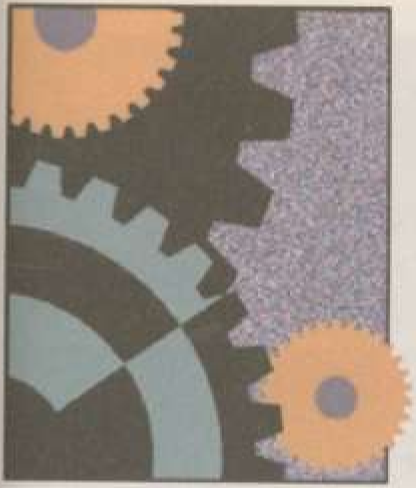
IF YOU WOULD LIKE TO PLACE AN ORDER FOR EITHER GAME OR RECEIVE MORE INFO ABOUT THEM - PLEASE TICK THE CORRECT BOX, AND FILL-IN YOUR DETAILS. Please send completed form (telephone/email us) to: Sadeness Software - 13 Russell Terrace - Mundesley • Norfolk • NR11 8LJ • UK Tel: (01263) 7221

Place a Pre-Order for **FOUNDATION** ☐ Recive further info about **FOUNDATION** ☐ Place a Pre-Order for **onEscapee** ☐ Receive further info about **onEscapee** ☐

Please fill in your details in BLOCK CAPITALS. Thanks.

Name ______ Address ______
______ Postcode ______ Country ______
Credit Card Number ______ Card Expiry Date ______ Issue Number (Switch only) ______
Telephone Number ______ Email ______
Your Machines Specs ______

Amiga Workshop



Workshop is here to give away some of the best Amiga trade secrets and almost certainly increase your knowledge with the finest tutorials on the planet.

76 Imagine 4.0

In Part 10 of our tutorial John Kennedy explains the process of animating classy looking ripple effects in water.

80 C Programming

Following last month's mouse escapades we take a look at the setting up of the GadTools library and its functions.

82 Wired World

Mat Bettinson gives his perspective on a whole host of handy Internet utilities, allowing you to access with ease.

84 Surf's Up

More wisdom from the Lord Net God, plus a varied selection of sites for you to check out whilst online.

85 Surf of the Month

Mat Bettinson being the Net dude that he is dons his rubbers again and catches some big surf.

88 Sound Lab

Tony Horgan guides you through your first steps with SoundStudio and Project XG, plus tips for this month's cover mounted 303 emulator.

90 DTP

Fancy finding out how to create your own Genies? No need to rub a magic lantern, as Larry Hickmott explains...

96 Q & A

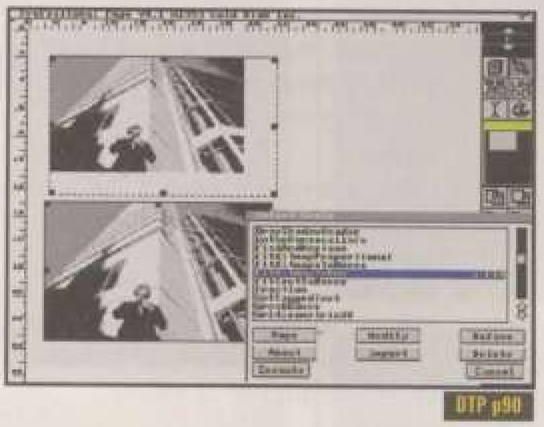
No Amiga question is too complicated for our team of experts to answer, well at least those questions we choose to print anyway!

99 A to Z

The first of a brand new feature where John Kennedy takes us through the alphabet of all things Amiga.

Imagine 4.0 p76

Wired World p82



DTP p90

Regulars

86 Back Issues

Look at CU Amiga's amazing back catalogue: full program cover disks, tutorials and much, much more! Do hurry, as we're getting pretty low on certain issues!

102 Backchat

Amiga users don't have a voice!? Here you can talk to all your Amiga owning peers, and swap views, hints and thoughts about everything Amiga.

103 Subscriptions

Our subscription offer is extended, so if you don't subscribe yet, now's your chance to save money, and guarantee a copy each month!

104 Points of View

Mat Bettinson writes an honest letter to the General Manager of Amiga International on how to build a bright future for his beloved Amiga.

PART 10 Imagine 4.0

Did you enjoy splashing around in puddles when you were young? John Kennedy still does it, so pull on your wellies and join in the fun.

The idea for this month's project came from messing around with another rendering program, Cinema 4D, and trying to animate a realistic ripple on a pond surface. You've seen what happens when you throw a stone into a still pond – there is a splash and the ripples spread out radially from the centre in a series of concentric rings.

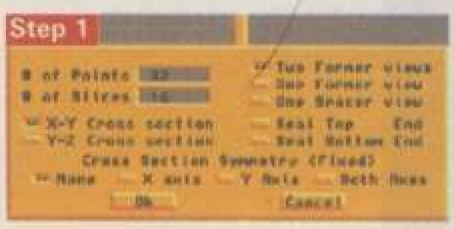
I thought about it for a while, and then turned to the ultimate rendering guru, Steve Worley, who wrote the seminal 'Understanding Image 2.0' – and has contributed many text files on Imagine works such as the 'Light Rom' CD package. Steve had it all worked out of course, so here's my interpretation of how to animate your own high-class ripple effect.

Good form

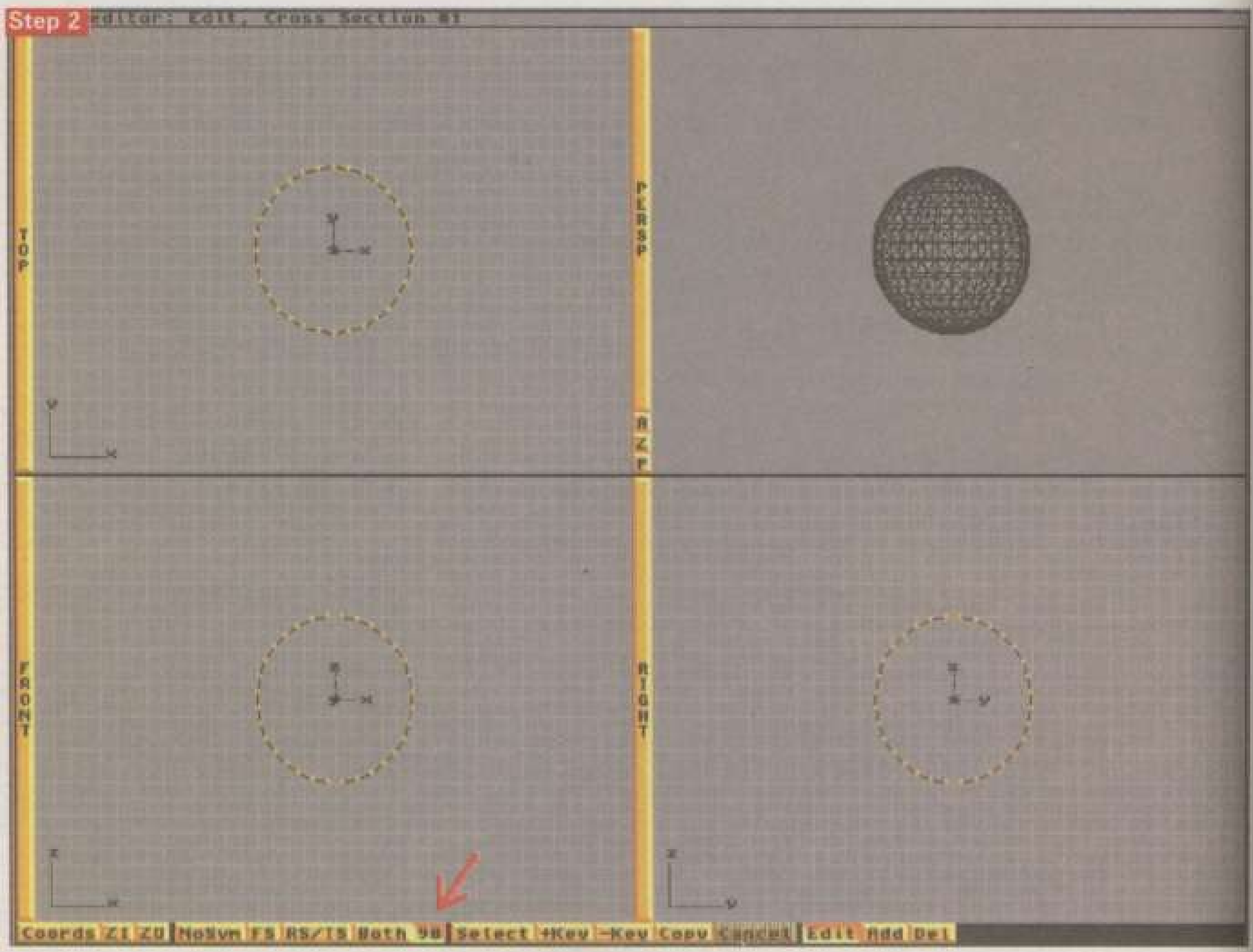
The secret is to use Forms, those often misunderstood objects which Imagine has always offered and few have ever bothered to use. Forms make creating symmetrical objects such as a rippling pond very simple, and the final effect is considerably better and more controllable than any Special Effect option. So roll up your sleeves, create a new project and let's get started.

Step 1

Go to the Forms editor, and create a new object. The default settings will suffice, but increase the number of points and slices. The larger the numbers, the smoother the final result – although more memory and rendering time will be required.


Step 1

# of Points 32
# of Slices 16
X-Y Cross section
Y-Z Cross section
Two Former views
One Former view
One Spacer view
Seal Top End
Seal Bottom End
Cross Section Symmetry (Fixed)
None
X axis
Y Axis
Both Axes
Ok
Cancel


Step 2

Editor: Edit, Cross Section #1
TOP
PERSP
FRONT
RIGHT
Coords Z1 Z0 NoSym FS RS/TS Both 90 Select +Key -Key Copy Cancel Edit Add Del

Step 2

Yes, it's a sphere, but we can soon change that to something more useful. Switch the Symmetry to 90 Degree from the menu or button, as this will allow us to make the maximum number of changes with the minimum amount of effort.

Step 3

Now drag all the points flat. You'll notice that you only need to drag one side, in one window view. Watch how the perspective view changes to become a flat disk. The new object doesn't need to be perfectly flat.

Step 4

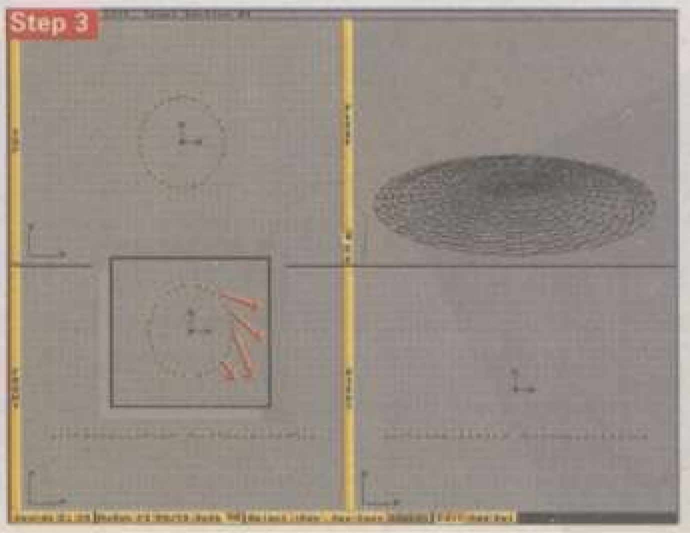
What we are actually doing is creating several 'key-frames' for the ripple motion. We can then let Imagine work out the in-betweens using its ability to morph between states. Select 'Save' and store the flat object under the name 'pond'.

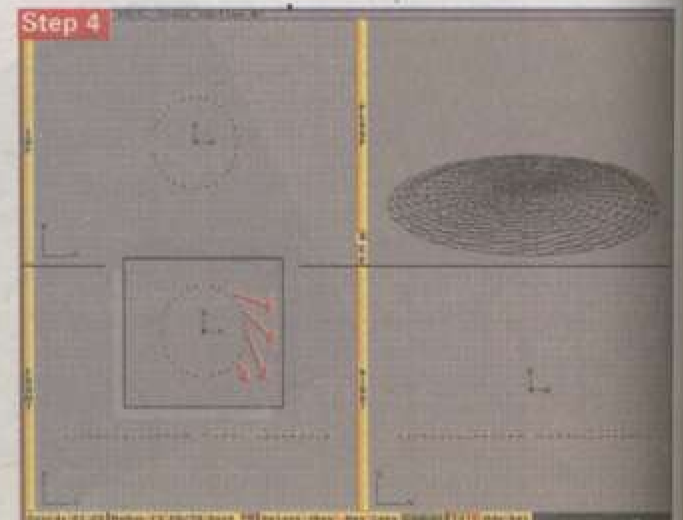
Step 5

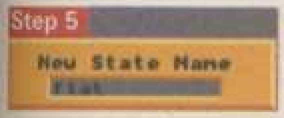
Now go to the Detail Editor, and reload the pond object. Here's the important part: pick the object, and open the States window from the States menu. Select the Create option and enter a new name such as 'flat'. Save the object again – don't worry about over-writing it.

Step 6

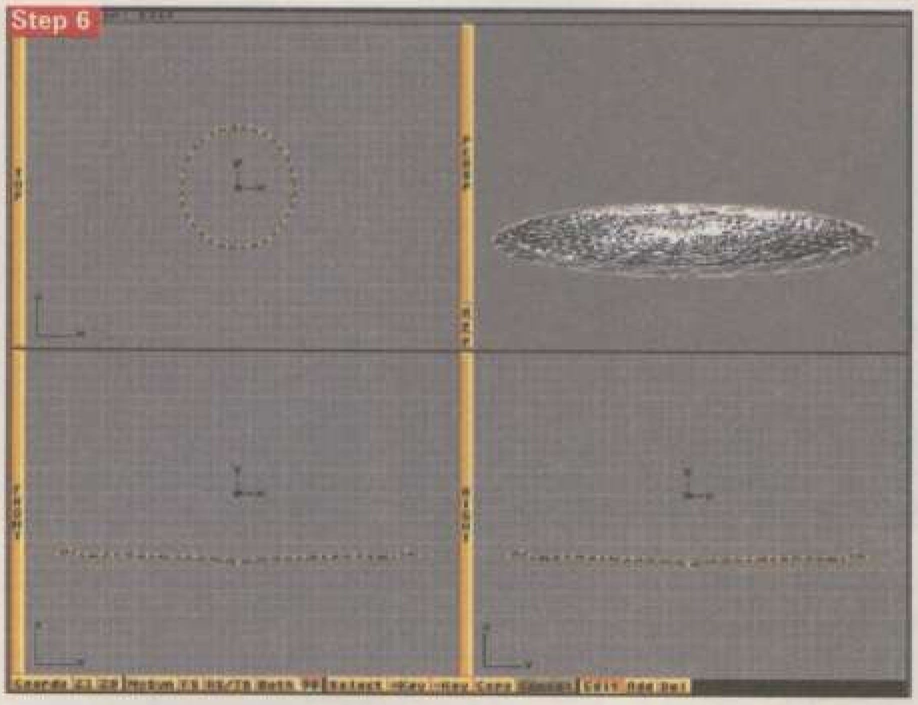
Go back to the Forms Editor, and reload the pond. Put the symmetry mode back to 90 Degrees, and now we are ready to model our splash.

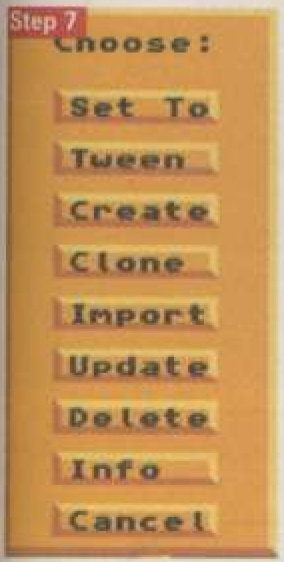

Step 3

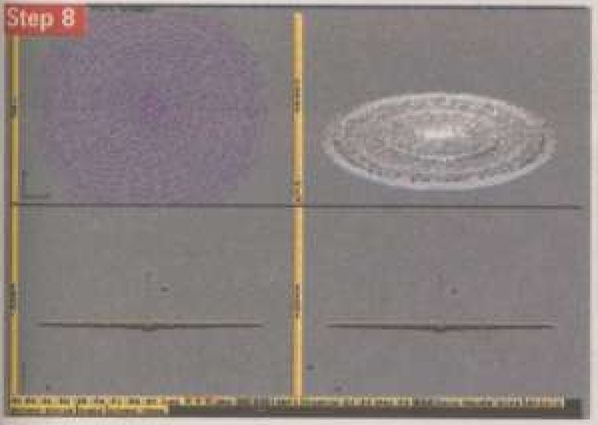

Step 4

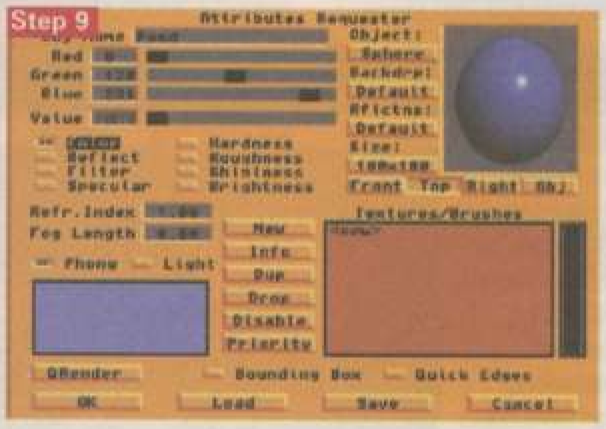


New State Name: Flat




Step 7
Choose:
Set To
Tween
Create
Clone
Import
Update
Delete
Info
Cancel




Step 9
Attributes Requester
Red
Green
Blue
Value
Color
Reflect
Filter
Specular
Hardness
Roughness
Shininess
Brightness
Object:
Sphere
Backdrop:
Default
Rflctns:
Default
Size:
100x100
Front
Top
Right
Obj
Refr. Index
Fog Length
Phong
Light
Textures/Brushes
New
Info
Dup
Drop
Disable
Priority
QRender
Bounding Box
Quick Edges
OK
Load
Save
Cancel

Name: Pond

Start with a tiny dimple located in the centre, like this.

Step 7

Save the object (again, don't worry about over-writing it), return to the Detail Editor, re-load the object, highlight it and create another new State, called 'rip1'. Save the object.

Step 8

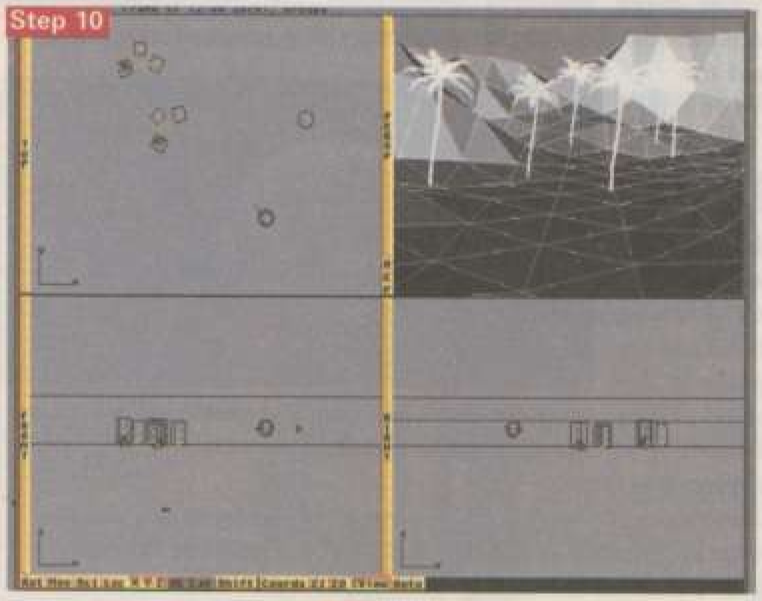
Repeat from Step 6, adjusting the ripples a little bit each time. You don't need to go overboard on the detail, and about half a dozen States should suffice. End up with a pond which has a small-ish ripple right on its edges.

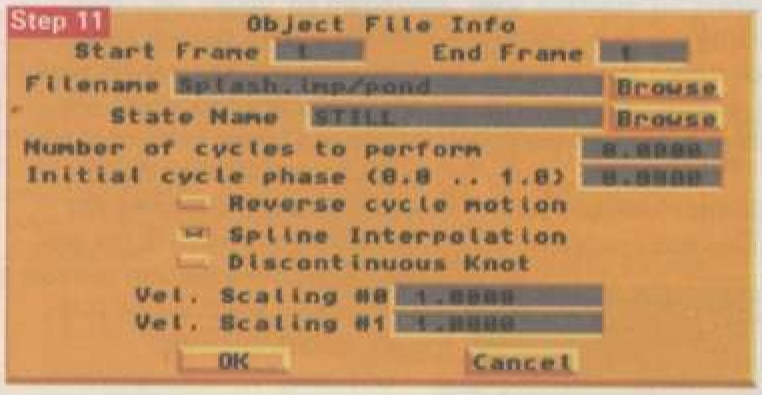
Step 9

Finally, in the detail editor, assign a material to the pond. It's meant to be water, so make it blue, reflective and slightly transparent. Skip transparency if you want quicker renders.

Step 10

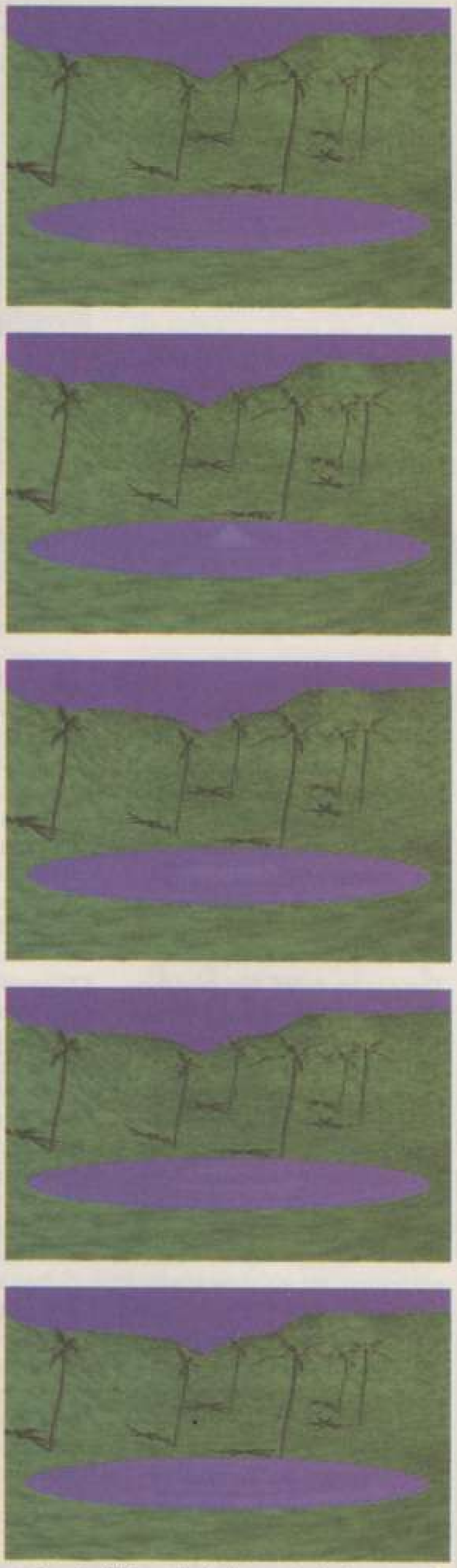
Now that our pond object has been completed, we need somewhere to put it. Start by creating a green landscape, and in the Stage Editor place the pond in the middle of it, with the camera pointing straight at it.



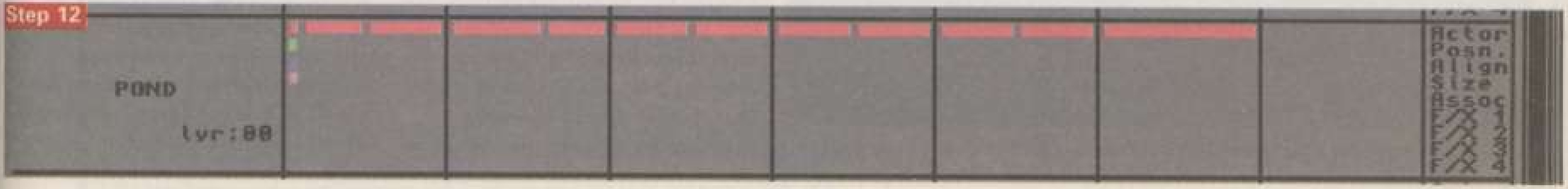

Step 11
Object File Info
Browse
Browse
OK
Cancel

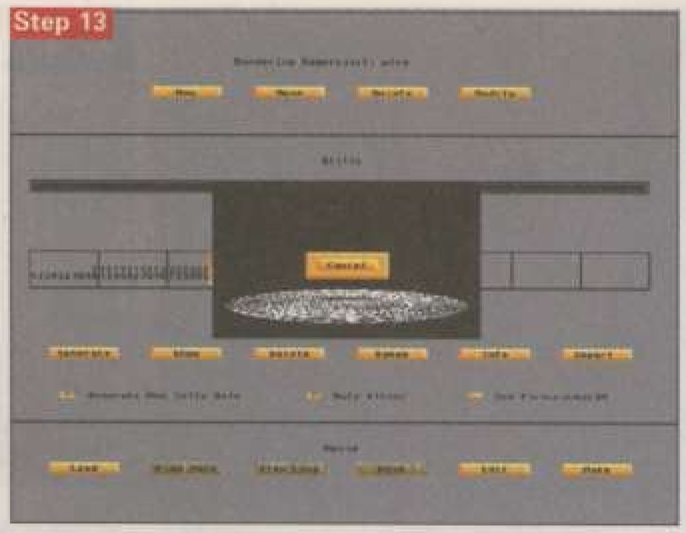
Start Frame: 1
End Frame: 1
Filename: Splash.imp/pond
State Name: STILL
Number of cycles to perform: 0.0000
Initial cycle phase (0.0 .. 1.0): 0.0000
☐ Reverse cycle motion
☑ Spline Interpolation
☐ Discontinuous Knot
Vel. Scaling #0: 1.0000
Vel. Scaling #1: 1.0000

A drop in the Ocean



▲ **Several stills from the rippling pond animation, created using the 'Form Object Morph' technique.**


Step 12
POND
lvr:00
Actor
Posn.
Align
Size
Assoc
F1
F2
F3
F4



Step 11

In the Action Editor, set the number of frames to something higher than one – try fifty or sixty to start with. Now we need to make Imagine morph between the various pond states. If you click on the pond's Actor bar you'll notice a setting for State: this is the item we'll change.

Step 12

Chop the pond's Actor bar into several segments, by adjusting the end frame of the first bar and then adding new segments. For each, alter the State setting to reflect the 'rip1', 'rip2' and so on. Imagine will morph the pond between them.

Step 13

Create a new sub-project file, clear some disk space and start rendering! This animation might take a while, so try a wireframe preview to make sure the ripple effect is working the way you expected. You may want an object to fall in the pond to cause the ripple in the first place.

Step 14

If you are feeling a little adventurous, apply multiple ponds to a flat plane of water. Offset the morphing actions for each ripple by a few frames and hey presto! You have an instant rain storm.

Just perfect for modelling the typical British summer. ■

John Kennedy

Speeding up rendering time

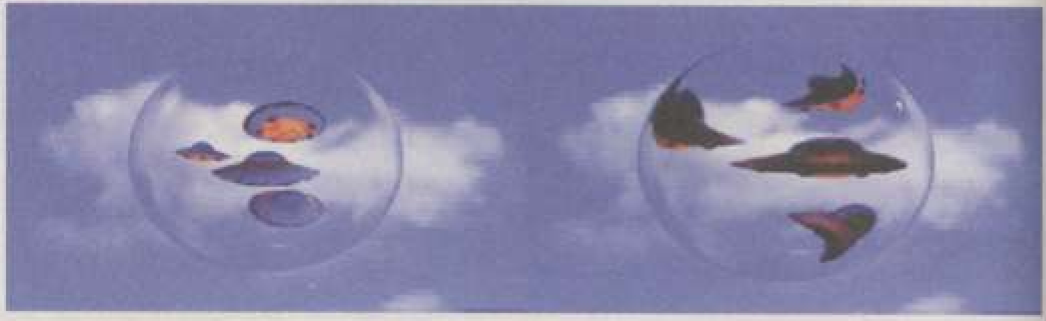
Look at these two images. The one without the pond was rendered in 4 minutes 11 seconds, the other in 23 seconds. Imagine that time difference extended over a one hundred frame animation and suddenly those seconds become very valuable indeed.

The trick is to make use of a pre-rendered image, and use it as the backdrop. Of course, in an ideal world, we would love to be able to perform a full ray-trace with shadows of every scene. There is no doubt that rendering the pond scene with all the landscape and trees present will give better results, as the trees are reflected properly in the water.

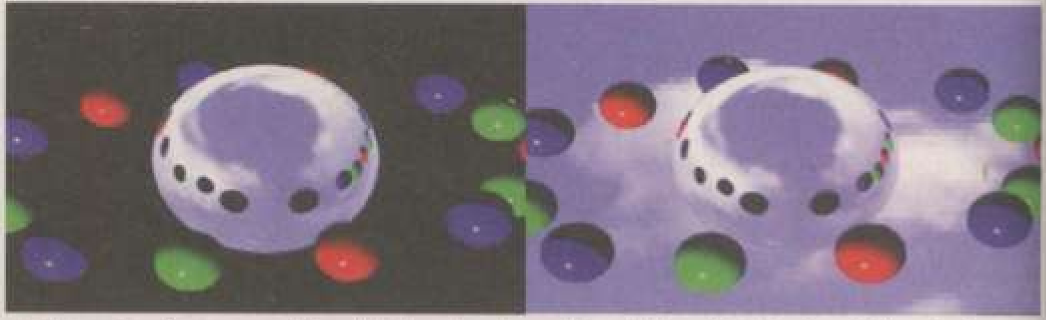
However, present day hardware isn't quite up to that speed yet. So instead I rendered the scene once, with full ray-trace shadows, but with no pond present. This scene was then used as a backdrop for the sixty frame pond animation. The background brush must be the same size as the image to be rendered, and it is set in the Action Editor's Global setting.

This time there was no need for a full ray-trace, so scanline rendering was used. This means that each frame in the animation rendered in seconds – if I had kept the objects and ray-tracing mode, the total animation would have taken many hours, and would've looked almost identical.

Cheating? You bet, that's just what image rendering is all about. If you can get the same effect in a fraction of the time, do it. Sometimes you simply can't supply all the details in the backdrop. If one of the trees was overhanging the pond, it should be included. However, the backdrop could still be used and it could include the other tree and their shadows.



▲ Using the global brush setting, foreground reflections can be taken care of too.



▲ Here are two images: one with a global brush, and one with a global and backdrop brush. When dealing with shiny objects, don't forget your global!

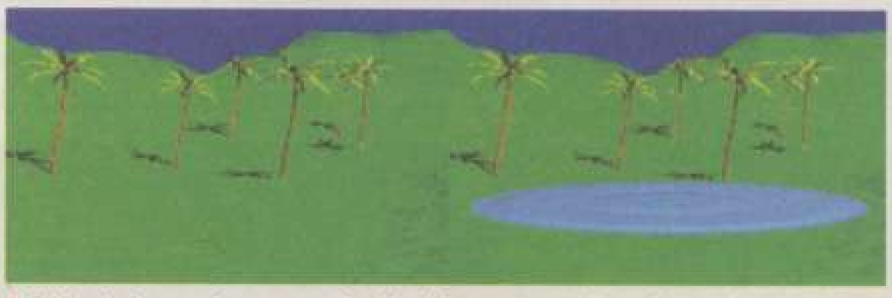
You may be wondering about foreground detail – if you render a reflective sphere for example, you need something which is reflected as though it was visible in the foreground, behind the camera. However, there is a way around this too.

Here is another example pair of images. One was rendered using all the objects and details, and it took 3 minutes, 11 seconds. The other has been rendered on an 'empty set', with only the object, camera and lightsource present. This render took only 1 minute 30 seconds. The foreground image was supplied to the Global Settings as the Global Brush. The saucers are warped slightly more in the second image, but adjusting the size of the global brush would solve that problem instantly.

Of course, for once-only still images this technique gains nothing: you still need to add on the time taken to render the backdrop (in this case, it took 4 minutes, longer due to the extra detail in the saucers). However, as part of an animation the time taken for the once-only backdrop becomes pretty negligible.

You can use these two backdrops for special effects. For example, when rendering a shiny logo for a TV company, switch on the global brush but ignore the backdrop. This causes detail to be included in the reflections, even though the background is a plain or graduated colour.

Remember too that you can animate the backdrops, and that makes it possible to create all kinds of special effects such as moving clouds or even animated starfields. You can even use frames which have just been rendered as the backdrop, creating a kind of recursion effect.



▲ Faking the image using a pre-rendered backdrop can save minutes in every frame rendered.

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Amiga C Programming

PART 3

Our C Programming series progresses to making gadgets this month, with the help of GadTools.

We're going to follow up last month's thrills and spills with the mouse by looking at how to create some gadgets and interact with them. In particular, we're going to look at using some functions from the GadTools library. Along the way, as ever, we'll be examining some of the more interesting bits of C.

New technology

The first example on the cover disks is "gadgets0.c". This builds on the final example of last month, so most of the code is familiar.

The new bits are the (by now) obvious setting up of the GadTools library, the insertion of error reporting (using "printf", declared in the "stdio.h" header file) for when things fail, and the replacement of the window opening code by a call to the function "setupWindow()" (which is where the meat of the example starts). To support the new stuff we've also had to add the prototypes of our new functions and make some constant definitions (the bits using "#define"). We will be looking at these constants shortly, but first of all we'll take an overview of the new code.

The function "setupWindow()" does almost all the new stuff concerning adding a GadTools gadget to a window. The basic structure is:

1) Get a handle for the screen on which our window will appear, using "LockPubScreen()", matched with "UnlockPubScreen()".

2) Extract the visual information from the screen, using "GetVisualInfo()", matched with "FreeVisualInfo()".

3) Create a new list of gadgets, using "CreateContext()", matched with "FreeGadgets()".

4) Create and add a gadget to this list by using "CreateGadget()", but with the freeing done by the "FreeGadgets()" which was used in the previous step.

5) Open the window to use this list of gadgets.

The first and second steps (getting the screen's visual information) are necessary so that GadTools can render its gadgets in an appropriate way. The main issue here is working out the correct pens to render the 3D look.

The last step (opening the window) is actually done by the function "createWindow()" which is very similar to the code we used last month, as we'll see. Once the window has been opened there are new messages to handle (generated when the user interacts with the gadgets), so "handleIDCMP()" has also been updated.

Inspect a gadget

Getting down to the nitty gritty now, the most interesting part is the code creates a new button gadget. We fill in a "NewGadget" structure (as shown below, for the variable "newgad") and pass this to the "CreateGadget()" function. (The "NewGadget" structure is defined in the header file "libraries/gadtools.h".)

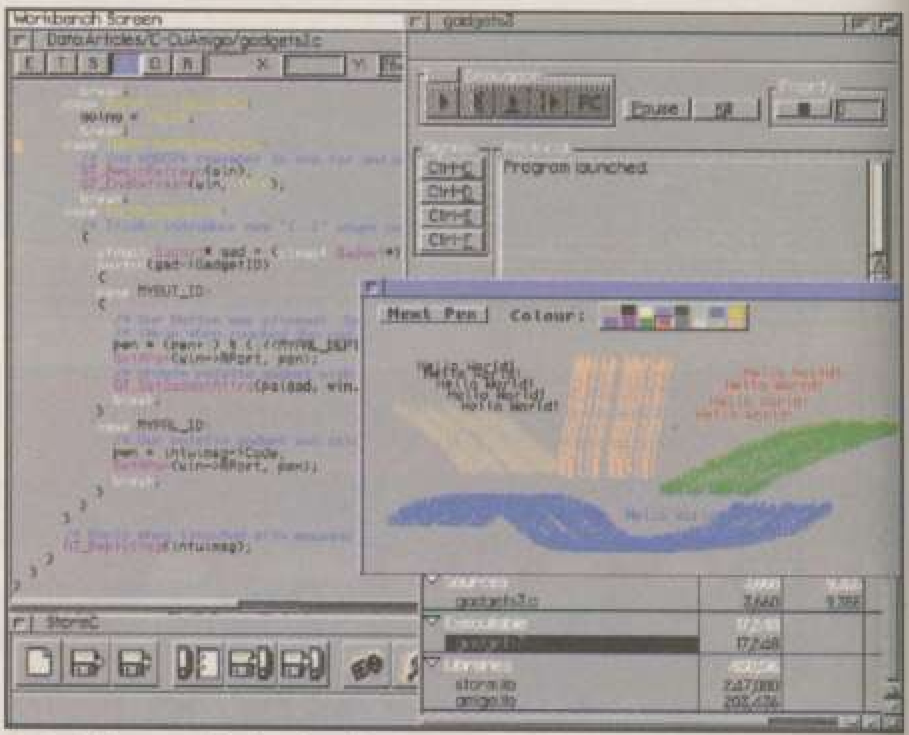
See example 1

Most of the data used to describe the gadget is taken from the constants defined at the top of the file (using "#define"). These are the things like "MYGAD_LEFT" and "MYGAD_TEXT". The other bits are the interesting parts. The first is the use of "offleft" and "offtop". These are needed because the gadget position is specified relative to the window's perimeter, not relative to the inside of its borders.

Luckily, we don't need to have a window open to calculate how big its borders are: we can get this information from the screen on which it will open. Hence, "offleft" and "offtop" are initialised like this:

See example 2

The value for "offleft" is nice and simple: it's the size of the left borders for all windows (with borders!) that open on this screen. The value for "offtop" is a little more complicated. It has to take into account the height of the title bar, which will be dictated by the size of the screen font. You can treat this calculation as a standard idiom.



▲ **Say hello to a multi-coloured world.**

Topaz or not Topaz

The last point of interest is the setting of the font that the gadget will use. The standard Topaz font has been chosen, mainly so that this example will work for everyone. To define the font, we've initialised a "TextAttr" structure (the "topazFont" variable). Once we've done this, we use a pointer to this data for the gadget's "ng_TextAttr" (by specifying "&topazFont" as the value).

See example 3

The fields are fairly obvious, except maybe the last two. The "ta_Style" is whether the font is to be emboldened, italicised or underlined. Zero means use just the plain font. You can find flags for specifying styles in the standard include file "graphics/text.h". They're the constants that begin with "FSF_". The "ta_Flags" specify some more intricate details about the font and should usually be left as zero.

There's a subtle simplification here: we know the Topaz font exists on all Amigas, so we know the gadget will be able to use this font. If we'd specified something like "XEN.font" then we couldn't guarantee the font would be available (or directly usable). In this case we'd need to augment our code to include an "OpenFont" and "CloseFont". We'll come back to this in a later tutorial.

If we specified the gadget's "ng_TextAttr" to be "NULL" then the default font (i.e. the screen font) would be used for the gadget. We would then have to make all our gadget sizes (and positions) dependent on the size of the font (since the screen could be using any font). This is known as "font sensitivity" and, as you can imagine, it's often a difficult task to do properly. For this tutorial, we'll stick to using the Topaz font so we can guarantee it will work nicely on all machines.

Making gadgets

At long last, the most important bit: the creation of a GadTools gadget using the "CreateGadget()" function.

Notice that we need to pass a pointer to the "NewGadget" data we created, so we specify "&newgad" as the third argument, and not "newgad" (which would luckily cause a compiler error with thanks to C's strong typing).

See example 4

The result of the "CreateContext()" call, "gad", is

Macros

The keyword "#define" is used to define a macro. In the first example program, "MYGAD_LEFT" is defined to be a macro that evaluates to the number 10, or more precisely the text "(10)". Wherever "MYGAD_LEFT" occurs it will be replaced (textually) by "(10)".

So, why use a macro/constant? Why not write in "10" directly instead of going to all this trouble? Well, the benefit is that you can group these constant definitions together in an easy-to-find place (like the top of the file), rather than having to hunt for the places where the values are used. And, if the same (logical) value is used in several places, then you only need to change one line (the macro definition) to change all occurrences of the value. Plus, it gives a readable name to a value, and this is a vital aid to documenting your code and making it easier to understand (for others, and for yourself at a later date).

However, there are some well-known pitfalls in using macros. The biggest one is that use of a macro will be replaced by its definition at a stage before the compiler tries to understand the text. You can do some great tricks whilst using this feature, but normally it's something to defend against. The approach we've used is to define our macros to be values in parentheses, ensuring that the textual substitution will unambiguously yield either the value we wanted or cause a compiler error. A good introductory C text book will explain this in more detail, if you're interested.

Code examples

Example 1

```
struct NewGadget newgad;
/* Setup our first gadget */
newgad.ng_TextAttr  = &topazFont;
newgad.ng_VisualInfo = vinfo;
newgad.ng_LeftEdge  = MYGAD_LEFT + offleft;
newgad.ng_TopEdge  = MYGAD_TOP + offtop;
newgad.ng_Width   = MYGAD_WIDTH;
newgad.ng_Height   = MYGAD_HEIGHT;
newgad.ng_GadgetText = MYGAD_TEXT;
newgad.ng_GadgetID  = MYGAD_ID;
newgad.ng_Flags   = 0;
```

Example 2

```
int offtop, offleft;
/* The offsets of our window borders */
offleft = scr->WBorLeft;
offtop = scr->WBorTop + (scr->Font->ta_YSize + 1);
```

Example 3

```
struct TextAttr topazFont;
/* Setup font description for 8pt Topaz font */
topazFont.ta_Name = "topaz.font";
topazFont.ta_YSize = 8;
topazFont.ta_Style = 0;
topazFont.ta_Flags = 0;
```

Example 4

```
/* Now create it and add it to our list */
if(gad = CreateGadget(BUTTON_KIND, gad, &newgad,
TAG_DONE))
 createWindow(glist);
else
 printf("Error: could create gadget(s)\n");
```

Example 5

```
/* (Wrap when reached the end of the palette gadget's
colours) */
pen = (pen+1) % (1<<MYPAL_DEPTH);
```

specified as an argument to "CreateGadget()" and used to hold the result.

This links together the gadgets you create and it makes the code for making several gadgets nice and simple (as we will see). The actual list of gadgets that the window must use is now stored in "glist", the address of which was originally passed to "CreateContext()".

Gadget window

The function "createWindow()" contains code that will probably be pretty familiar to you.

The significant differences you will see are: the addition of "BUTTONIDCMP" (to enable us to hear messages from the button gadget) and "IDCMP_REFRESHWINDOW" (a requirement of using GadTools) to the "WA_IDCMP" tag, the use of the "WA_Gadget" tag (specifying the gadget list we created as the tag data), and the "GT_RefreshWindow()" call after the window has been opened.

The "handleIDCMP()" function is very subtly different: it must now use "GT_GetIMsg()" and "GT_ReplyIMsg()" instead of "GetMsg()" and "ReplyMsg()". This brings a nice advantage: the result of "GT_GetIMsg()" is a "struct IntuiMessage*" rather than just a "struct Message*" so we can lose some of the clutter of doing casts. The rest of the code is unchanged, except that we prevent drawing over the gadget by checking the mouse's Y position. Plus, the "IDCMP_REFRESHWINDOW" message must be handled (the code is another idiom), and we can act on button presses (the "IDCMP_GADGETUP" message). We'll make the button press change the colour we use for drawing to the next pen. Try out the example to see exactly what will happen.

The same program

The next example, "gadgets1.c" (can you spot the trend?), is identical in function to "gadgets0.c". The differences are:

1) A different style of opening libraries is used. The opening and closing are separated into different functions, and this can be done because the library base variables are global (and initialised to "NULL" in their declarations).

2) A small number of textual optimisations can be made: "glist" can be initialised in its declaration and so can "topazFont" (although such structure initialisations should be used only when dealing with small and simple structures).

3) The results of "CreateContext()" and "CreateGadget()" don't really have to be checked until the last "CreateGadget()", since that will fail (i.e., return "NULL") if "gad" is "NULL", and all successful allocations will be de-allocated en masse by the "FreeGadgets()" call. This can help you to simplify things when creating several gadgets.

A variation on this ("gadgets1a.c", bucking the trend!) uses macros for the attempts to open a library, although it is fairly safe to say that you can continue right on ahead and ignore it.

Small friend (palette)

The next example, "gadgets2.c", creates a palette gadget next to the button, so you can now pick a pen colour directly. This shows how it's just the last call to "CreateGadget()" that's important, in terms of checking errors.

The interesting bits of this example are the way the gadget text, "Colour:," is used as a label, the specification of tags to describe various attributes the palette gadget should have, and the way we can decide which gadget generated an "IDCMP_GADGETUP" message (in "handleIDCMP()"). There's also a trick using "{..}" to introduce a new scope within a "case" so that the gadget pointer, "gad", is as local to the code that uses it as possible.

The final example, "gadget3.c", provides the final polish. We remember the result of "CreateGadget()" for the palette gadget in a global variable, and use this to update the palette gadget selection when the user clicks the button.

A subtlety is that now we must limit the "pen" variable to the range of the palette gadget when it is incremented, so we therefore use the modulus operator, "%", and the bit-shift operator, "<<" (for calculating the number of colours from the bit-plane depth).

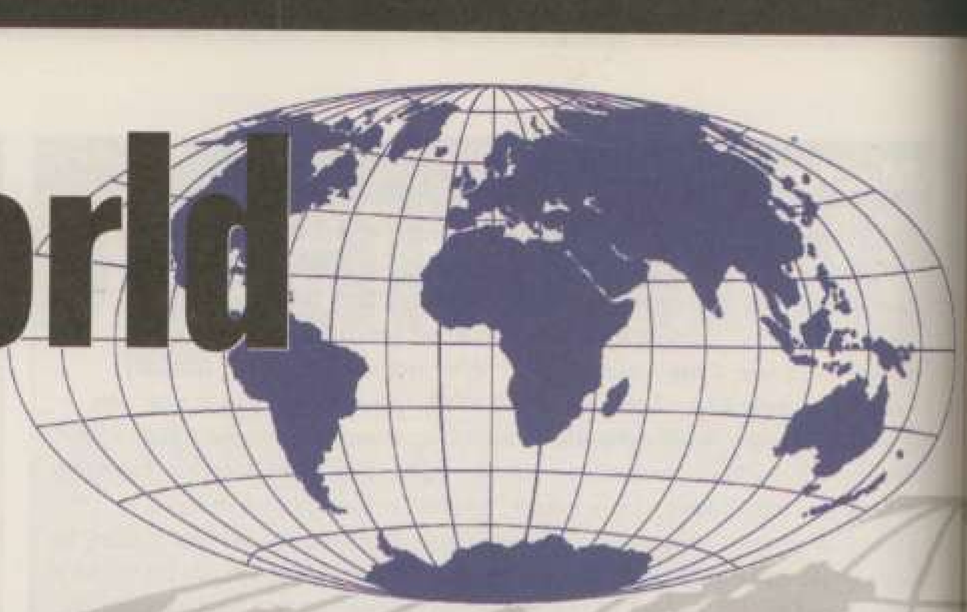
See example 5

The code to update the palette gadget uses "GT_SetGadgetAttrs()" with a short tag list to specify the attribute that we're changing ("GTPA_Color", the selected colour).

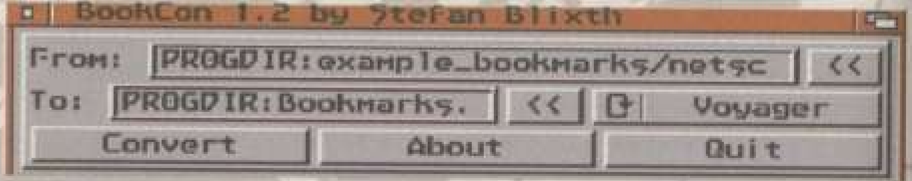
There should be plenty here to play with. You could even try making other kinds of gadgets. Try taking a look at the "libraries/gadtools.h" header file and see what you can discover. I'll be seeing you next month then! ■

Jason Hulance

Wired World



In this month's comms column we round up half a dozen useful utilities and techniques designed to enhance your Net access, including a crash course on IRC.



From: PROGDIR:example_bookmarks/netsc

To: PROGDIR:Bookmarks. — Voyager

▲ The simple and functional GUI of BookCon, here converting Netscape to Voyager bookmarks.

SynClock45.lha

Using the Internet without a battery backed clock in your Amiga can be a problem, but it's not impossible. If you're using Miami, you can simply click on the Get Time switch on the TCP/IP page of the Miami GUI.

Then insert 132.163.135.130 in the box which is an Atomic Clock site operated by the US Government. In order for this to work, you'll need to make a setting in Workbench first. You'll need to set an environment variable called TZ. You can accomplish this with the following line in the UK:

```
Setenv TZ 'GMT'
```

This will create TZ in your ENV: directory. To save this, copy env:TZ to envarc: Naturally if you're in another time zone, you'll have to use that instead (Change the GMT). AmiTCP users aren't left out, as there's an excellent little DOS/ARexx script called SynClock which performs exactly the same operation. You can find this on the Aminet at comm/tcp/SynClock45.lha or the Magazine/WiredWorld directory of this month's CD as usual.

You need to execute SynClock with your GMT offset such as execute synclock 0, for GMT. ARexx must be running and you should insert that line in some kind of script that's run after you link up. This does vary from AmiTCP setup to setup.

AWeb MIDI

Many web sites now have an embedded MIDI soundtrack which can be played automatically if you have GMPlay or MIDI equipment connected. Currently, the only Amiga browser that properly supports the <EMBED> tag used for playing MIDIs is AWeb II. The procedure detailed here is similar for the other browsers but until updates arrive supporting <EMBED>, these settings will have no effect.

AWeb II's necessary configuration can be found on the Settings/Browser settings menu. The last page, Viewers, contains descriptions of what AWeb will do with certain file kinds. This method is common to all web browsers. We need to add a definition for MIDI and to do this, click ADD and create a type audio/midi. Make the extensions mid, midi and kar separated by a single space. Change the action gadget to external program. Now the command of our choice will be launched. Insert GM:GMPlay as the name and then the following line as the arguments:

```
<>"CON:100/100/500/120/GMPl
ay/SCREEN %n" %f V=400
F=20038 M DF B=2
```

The line might be complex but it's worth it. The CON part opens a Shell which GMPlay is launched at... handy. So, we can click on it and press Control-C to stop the MIDI! The %n is placed there so that the CON opens on the right screen. The Volume frequency, Mono and other settings are just GMPlay settings for a low CPU usage, useful for web browsing. See the GMPlay documentation for changing them.

Alternatively, if you built last month's Project XG and, of course, you are using a second serial port for your modem, you can use MIDIPlay provided on the floppies or CD. Use the same line as above but insert the full path to your MIDIPlay executable in the name gadget. Use this line as the arguments:

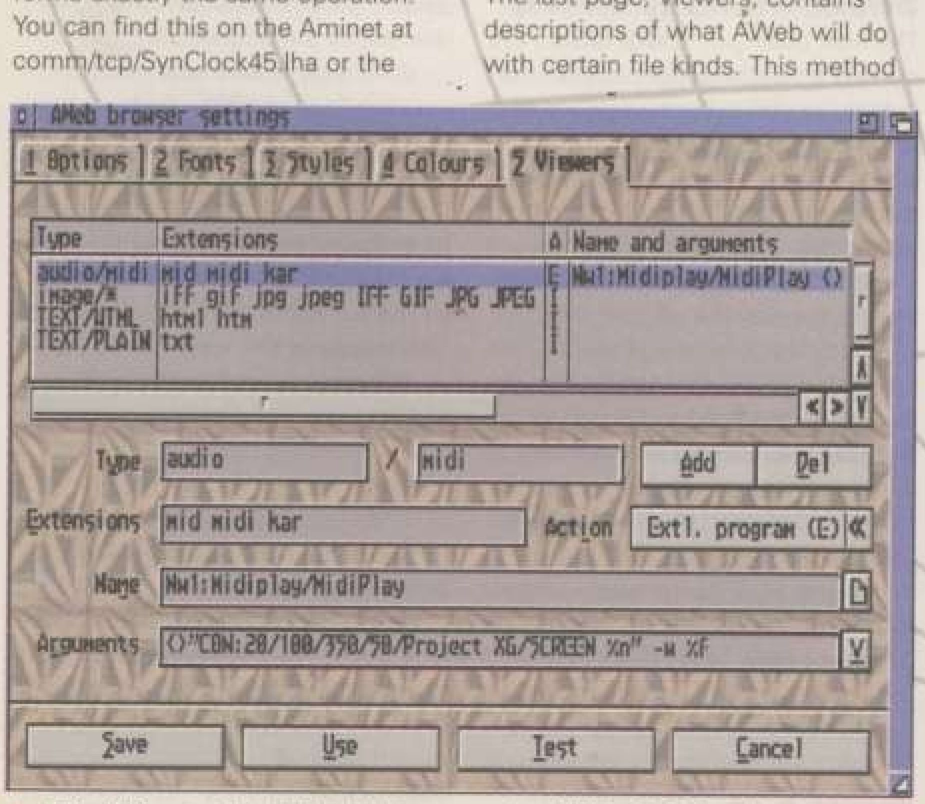
```
<>"CON:20/100/350/50/Projec
t XG/SCREEN %n" -w %f
```

This will disable the window since we can't seem to launch MIDIPlay's window on a public screen from the CLI. Instead only the credits appear in a tiny CON. Your MIDIs are then piped through Project XG for excellent quality audio with virtually no CPU time. Great! Press Control-C to stop it.

Bookmark converting

If you've changed web browser or intend to, the lack of your long built up bookmarks can be a serious pain. Fortunately there's a top little utility called BookCon to help out. You can find it on our CoverCD in the Magazine/WiredWorld directory or on the Aminet at comm/www/bookcon.lha

BookCon will convert all Amiga browser bookmarks between each other, but also interestingly it will convert Netscape bookmarks. So if you use Netscape at work or Uni, you can pop the bookmarks onto a 720K PC disk, take that home to



Type	Extensions	A	Name and arguments
audio/midi	mid midi kar	E	Nw1:Midiplay/MidiPlay ()
image/*	IFF gif jpg jpeg IFF GIF JPG JPEG		
TEXT/HTML	html htm		
TEXT/PLAIN	txt		

Type: audio / midi

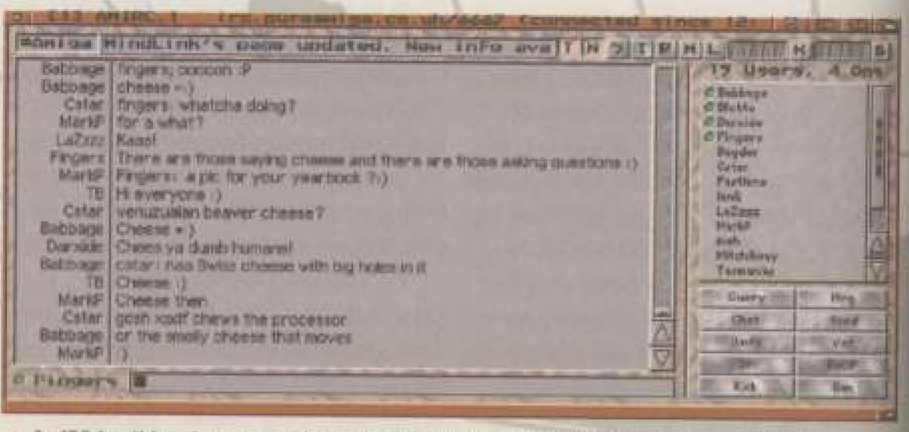
Extensions: mid midi kar

Action: Extl. program (E)

Name: Nw1:Midiplay/MidiPlay

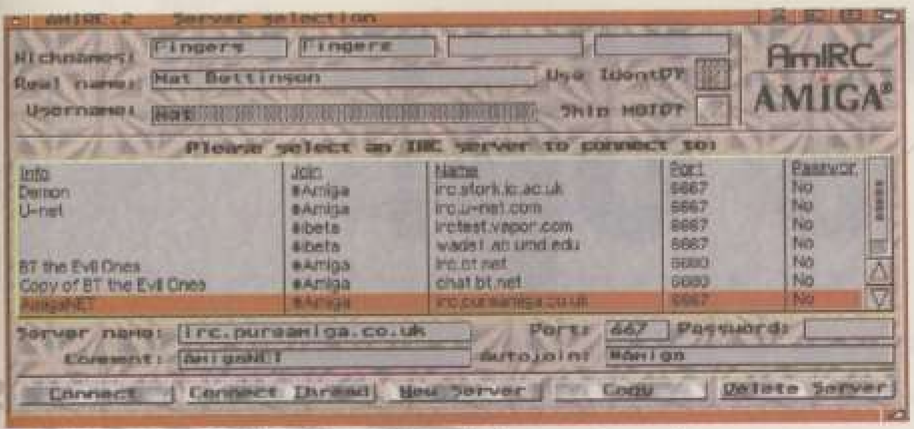
Arguments: <>"CON:20/100/350/50/Project XG/SCREEN %n" -w %f

▲ Adding MIDI support into AWeb 3. In this case we have MIDIPlay for Project XG. Wow!



```
#Amiga MindLink's page updated. New info ava
 Babbage | fingers; oooooh :P
 Babbage | cheese =)
   Cstar | fingers, whatcha doing?
   MarkP | for a what?
  LaZzzz | Kaaa!
 Fingers | There are those saying cheese and there are those asking questions :)
   MarkP | Fingers: a pic for your yearbook ?:)
      TB | Hi everyone :)
   Cstar | venuzuelan beaver cheese?
 Babbage | Cheese =)
 Darxide | Chees ya dumb humans!
 Babbage | cstar: naa Swiss cheese with big holes in it
      TB | Cheese :)
   MarkP | Cheese then
   Cstar | gosh xodf chews the processor
 Babbage | or the smelly cheese that moves
   MarkP | :)
@ Fingers
```

▲ AmIRC in all its glory; arguably the best IRC client on any platform let alone the Amiga.



AmIRC.2 Server selection

Nicknames: Fingers | Fingerz

Real name: Mat Bettinson

Username: Mat

Use IdentD?

Skip MOTD?

Please select an IRC server to connect to:

Info	Join	Name	Port	Password
Demon	#Amiga	irc.stork.ic.ac.uk	6667	No
U-net	#Amiga	irc.u-net.com	6667	No
	#beta	irctest.vapor.com	6667	No
	#beta	wade1.ab.umd.edu	6667	No
BT the Evil Ones	#Amiga	irc.bt.net	6680	No
Copy of BT the Evil Ones	#Amiga	chat.bt.net	6680	No
AmigaNET	#Amiga	irc.pureamiga.co.uk	6667	No

Server name: irc.pureamiga.co.uk

Port: 667

Password:

Comment: AmigaNET

Autojoin: #Amiga

▲ AmIRC's server config. We've just added the ANet irc.pureamiga.co.uk server.

your Amiga and convert to your favourite Amiga browser. Great stuff. BookCon has a workable little GUI. All you do is select the source bookmark file and cycle the gadget to the browser you want to export to. It even saves them out as plain text.

IRC

IRC stands for Internet Relay Chat. It's a real time conference where many people can talk to each other at the same time. There are several IRC networks and lots of 'channels' in each network. You can even create your own on any topic you like. The Amigas standard IRC software is AmIRC, which is arguably the best IRC client on any platform. CU/NetConnect users will have this as standard, and anyone else can get a copy from Vaporware's web site at http://www.vapor.com

The first thing you need to do is choose a 'nick' (nickname) for yourself. This might be a shortening of your name or anything unique to you. Enter your real name and user name if this isn't shaded out (most likely if you're using Miami). AmIRC has a load of servers preconfigured and they may or may not work.

There won't be entries for the network ANet so it's worth putting those servers in by hand. Just click New Server, place the name of the server in the name box, and leave the port and password boxes alone. A short description like 'UK Anet' in the Info box would be ideal. Now click on the selected server and hit connect, whilst online of course.

#Testing123

There will be some delay while AmIRC negotiates a connection. Eventually the introduction for the sever should scroll by. The trick now is to type '/join #Testing123'. Suddenly you'll be launched into an IRC channel which you've created. If there was no one there, ie no channel, then you'll be the only person there and you'll see a little green light next to your nick which says you have 'channel operator status'. This means you can change modes for the channel. You can run AmIRC again and log in as a test user so two people are in the channel.

Type something into the box at the bottom. Hit Return and it will appear in the listserv next to your nick. If there was anyone else in the channel, they'd see it too. Since you have operator status, you can use the buttons at the top of the screen to change modes. See the box below. You can also type a topic in the topic box at the top.

When it's all clear, you can leave by typing '/leave #testing123' and now you can type '/join #Amiga' for the real thing. The folks in the channel should be happy to help you out with any questions you might have.

You can change your nick with '/nick <newnick>', perform and action by typing '/me does something', and message people privately by typing '/msg <nick> what you want to say privately'. The tab key can be used as a shortcut.

Private chats

Type '/query <nick>' for a little window to privately chat between yourself and another person without always typing '/msg'. You can send a file to someone by using '/dcc send <nick>' and a filerequestor appears.

If someone sends you something, the DCC receive GUI automatically appears. There's much more, reading the AmIRC documentation can't hurt especially when it comes to configuring AmIRC in detail. See you on Anet #Amiga! ■

Mat Bettinson

Major servers and channels

Unless otherwise stated, all servers use port 6667.

ANet #Amiga #Freeciv

irc.pureamiga.co.uk irc.whiterose.net irc.it.kth.se irc.thule.no

New popular Amiga only IRC network, so largely immune from take-overs and splits, has a very nice user database on their web site: http://www.thule.no/anet/

Efnet #Amiga

irc.ais.net irc.io.org irc.cris.com

The largest IRC network, predominantly American, dominated by splits and channel take-overs. ANet was considered a direct response to a failure of this network.

IRCnet #Amiga #AmigaCafe #AmigaGer #AmigaSwe

irc.u-net.com chat.bt.net irc.stealth.net irc.xs4all.nl irc.swipnet.se

The Euro side of the great Efnet split. Very big and busy, lots of servers, lots of hostile take-overs and splits though.

Dalnet #AmIRC

defiant.dal.net marvin.dal.net centurion.dal.net glass.dal.net

Started by users of the #Startrek channel, it has a small cliquey core of Amiga enthusiasts. Dalnet uses port 7000.

Undernet #Amiga #AmigaCafe #AmIRC

eu.undernet.org us.undernet.org au.undernet.org

An early alternative to Efnet, it's now sizeable and has a pretty good Amiga following. http://www.es.co.nz/~kinetik/amiga/

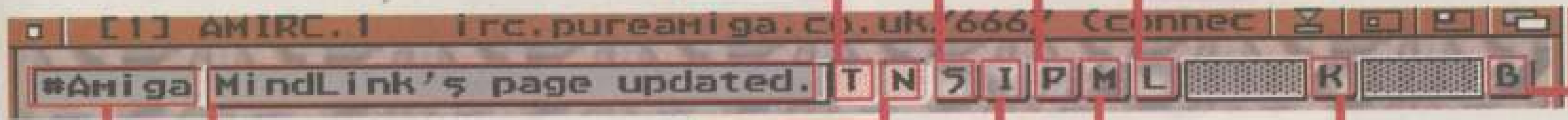
AmIRC's control panel explained

Topic protection. Only channel operator may change the topic. Normally enabled.

Secret mode. Channel does not appear in a channel list. Normally off.

Private. If enabled, /whois on a user on this channel will not reveal this channel.

Limit users. Number in box sets maximum number of users in channel. Normally off.



[1] AMIRC.1 irc.pureamiga.co.uk/6667 (connec

#Amiga | MindLink's page updated.

Banlist Banlist GUI

Channel name

Topic

Channel messaging. Disable messaging channel via/msg. Normally enabled.

Invite only. Can't join channel unless someone there types/invite <user> Normally off.

Moderate. Only ops and people with/voice may speak to the channel used for conferences. Normally off.

Keyword. If enabled, users must join with a keyword by using/join channel keyword. Normally off.

Surf's Up!

This month we discover a Worldwide weather monitoring service, a networkable free Civilization clone...

Net God speaks

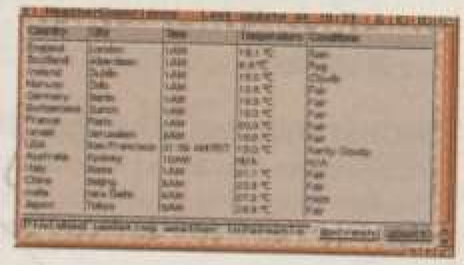
There's a fresh trend appearing increasingly from Net software authors of late. That is to implement cutting edge features in order just to be the 'first'. I'm not entirely convinced of their apparent logic here. In reality no other user of another platform could care less if some Amiga program does 'x' for example, and their big application doesn't.

Of more pressing need for us are the basic features that we still have lacking. Javascript in web browsers is a classic example. None of the three big boys deems that this aspect is important despite the fact that it's the single greatest missing feature that stops us from using web pages *just* as they'd be used on Netscape.

I'm not saying it's easy or that it's not abused on the Net but this has never been a valid argument for not having the feature in the first place. The same argument was thrashed out with Frames when CU Online adopted their use.

I can think of a zillion really cool things Amiga users could do on their web sites with Javascript. Do we need HTML 4.0 to be the first?

Surely authors should be addressing the areas of the biggest impact on what it is we want to do, right here and right now.



Weather Experience 1.5 released

Weather Experience is a small Net client that allows monitoring of weather conditions throughout the world. It relies on the information available at a few core US based services so, unsurprisingly, all of the best information is on American cities and regions. However, there is at least temperatures, general conditions and local time available for a host of cities around the world.

The client is extremely easy to set up to display your chosen locations and the specific fields you want to view. You can find Weather Experience 1.5 in the Online directory on this month's CUCD or you can obtain it from **ftp.thule.no/pub/uts/**

Aminet mods fill wuarchive HD?

The main Aminet archive, at **http://www.aminet/org/~aminet** and **ftp.aminet.org** has been plagued by outages recently. The most recent reasons given involve hard drives (or rather a RAID, very big hard drive array) filling up. The mirrors still continue to work but of course they won't be updated with new uploads until the main archive at wustl works once again.

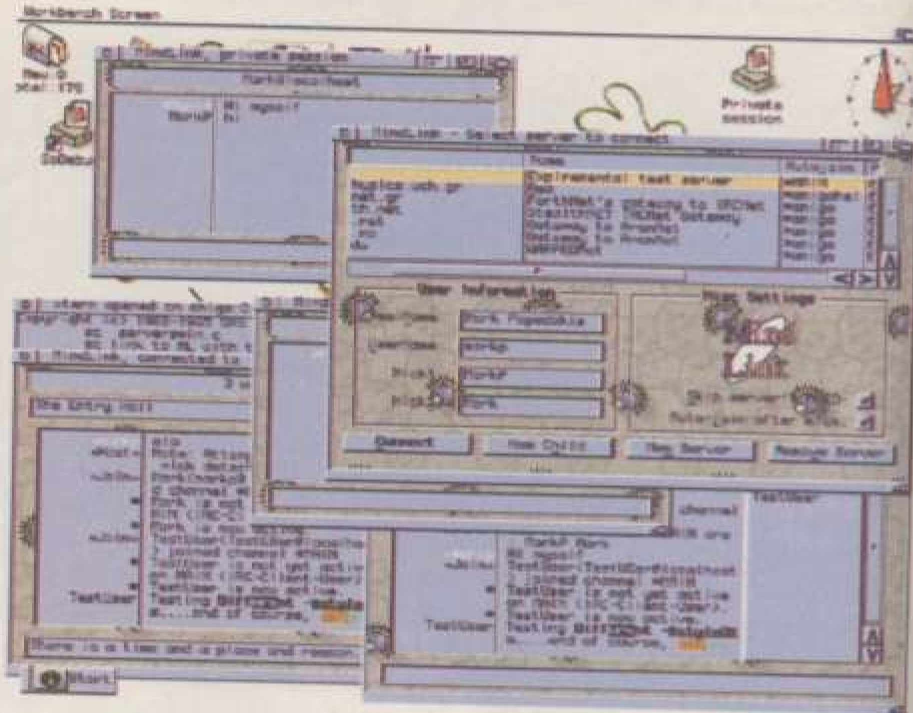
We contacted Urban Mueller, Aminet's maintainer, to ask him what the story is. It seems 'wuarchive', the machine that the main Aminet site is hosted on, filled its 70Gb RAID and is being upgraded to 115Gb. The question is, how much space is freed if Urban starts up the touted module archive and moves Aminet mods to there.

New IRC client MindLink

Believe it or not, some people still count MUI as a disadvantage when running Net software. Those people have been a little out of luck with IRC software since Grapevine's development fell into disrepair some time ago. Rescue is apparently coming in the form of MindLink, a new ClassAct based IRC client.

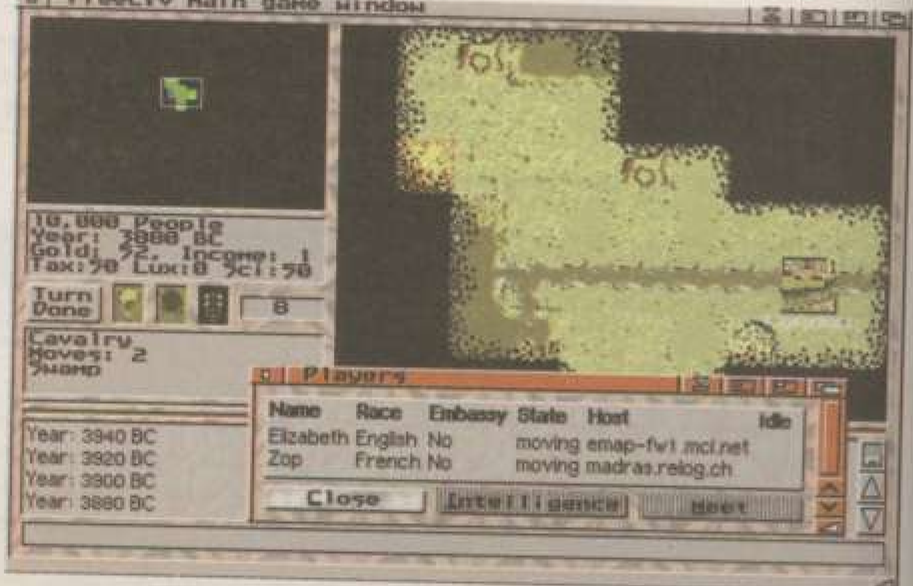
Obvious comparisons will be drawn against the Amiga's MUI-based brilliant IRC client, AmIRC. MindLink claims to address the messy multi-window nature of AmIRC and it will be possible to iconify individual windows.

There was no public beta version out as we went to press but check **http://palamida.math.uch.gr/markp/MindLink.html**, as there might be by the time you read this.



FreeCiv on the Amiga!

University students often play FreeCiv, a free civilization clone for Unix machines with up to 14 people able to play at once. Running a server is simplicity itself. Recently the Norwegian Troels Walsted Hansen ported FreeCiv to the Amiga. It can be found on the Aminet in the path comm/tcp/Freeciv10.lha. The game is presented in a MUI interface and requires a V43 24-bit datatype to be installed also. FreeCiv is becoming very popular – there's an IRC channel called #freeciv on the new Anet IRC network, **irc.pureamiga.co.uk** – so drop in and get playing! ■



```
10,000 People
Year: 3880 BC
Gold: 52  Income: 1
Tax:50 Lux:0 Sci:50
```

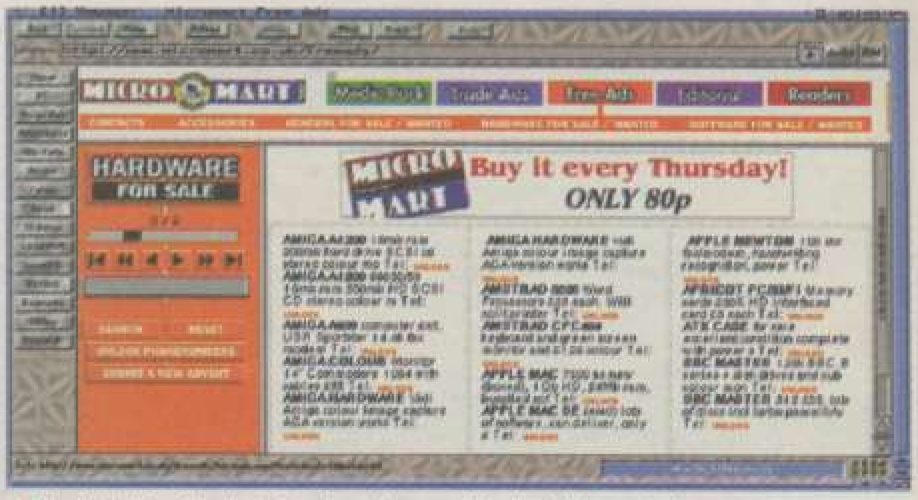
```
Cavalry
Moves: 2
Swamp
```

Name	Race	Embassy	State	Host	Idle
Elizabeth	English	No	moving	emap-fw1.mci.net	
Zop	French	No	moving	madras.relog.ch	

```
Year: 3940 BC
Year: 3920 BC
Year: 3900 BC
Year: 3880 BC
```

Surf of the Month

This month CU's Net man, Mat Bettinson, does the Web surfing thing. Like he doesn't anyway...


MICRO MART
Mode Buck
Trade Ads
Free Ads
Editorial
Readers
HARDWARE FOR SALE
Buy it every Thursday!
ONLY 80p

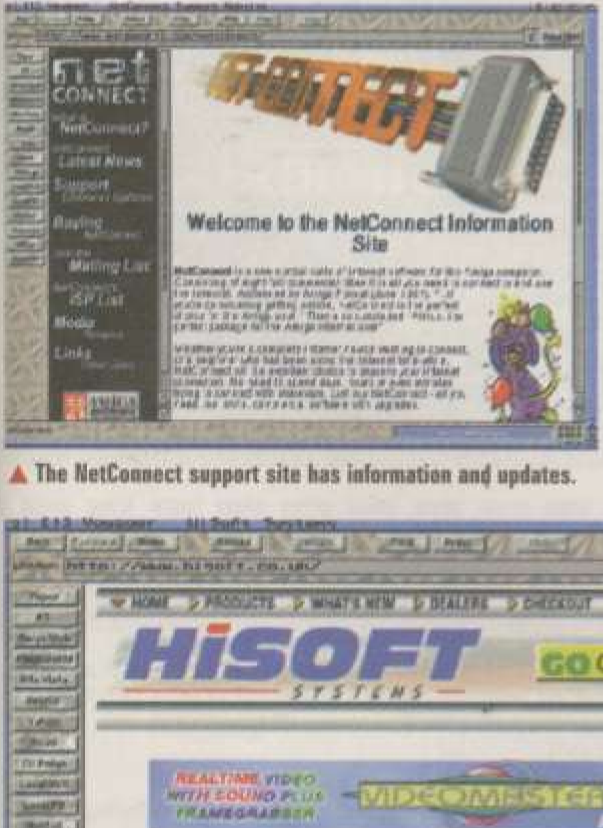
▲ **Hey look, lots of lovely Amigas for sale second hand on Micromart's home page.**

Hey this is neat, I've never done a Surf of the Month before so let's start from the beginning. First off, we need to buy an Amiga. Sound good? Right, well let's cruise over to **Micromart**, the UK free advert magazine which has lots and lots of cheap Amiga hardware for sale. Trying the hardware for sale section, I found an A1200 68030 50Mhz 10Mb of RAM and 200Mb hard drive for £300.

Can't complain about that! I thought I'd put in an ad for a Vic20 too, maybe someone will buy it. Free adverts go on the web site and the printed weekly which is a great way to offload some computer products for cash. It really is a great magazine with a great web site to accompany it.

OK, now we've got an Amiga, let's go check out some modems to go with it of course. Good old **US Robotics** aren't limited to the US at all luckily. There's a good USR site also which is good news since the modems are country specific. The hot news is the 56K modems at the moment, of course. USR's X2 modems offer 56K if you buy a new one, or you might have a USR Sportster Flash modem. The latest code to make the modem X2 56K compatible for the UK can be found there. Naturally this works with Wirenet, the UK's only Amiga specific provider.

We'd better get us some high speed serial for this flash new X2 modem. What better place to look than **HiSoft's** excellent web site? It's a bit of a graphic overload but somewhere on there is the Whippet PCMCIA high speed serial port. Holy cow, we can even buy it online. This is pretty high-tech stuff and there's lots more products to check out too, like the excellent IBrowse web browser and CD writer bundles.


net CONNECT
NetConnect?
Latest News
Support
Buying
Mailing List
ISP List
Media
Links

Welcome to the NetConnect Information Site

▲ **The NetConnect support site has information and updates.**

What we need now is some nifty software to use on our kick butt Amiga Internet machine. For that, we'd best haul over to the **NetConnect** home page. This is the support site for the Net software package called NetConnect. You may remember we covermounted NetConnect Lite on the NetConnect/Wirenet connection offer. Via this page you can find out about new versions, buy the full version and get on the NetConnect mailing list. Happy joy!

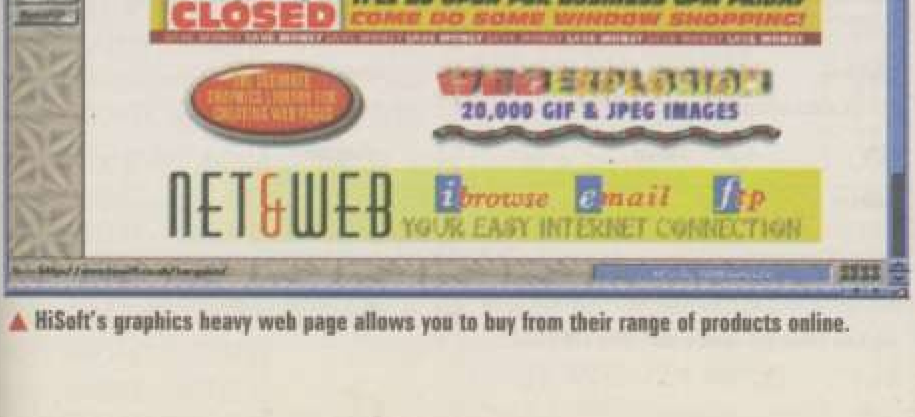
Now that we're online and we have all the best hardware and software, I suppose we need one of those 'special' sites. I've always fancied a picture of **Sarah Cox** (from Channel 4's, 'Girlie Show'). Actually I've always fancied Sarah Cox full stop. A search in Alta Vista for Ms Cox turns up a site promising lots of pictures of her and other celebrities. Shamelessly it's a fake and actually a plug for a UK comedy web site called 'Comp U Crap'.

It is a great place to discover by accident, and the ensuing laughter made me forget Ms Cox. Just as well really. ■

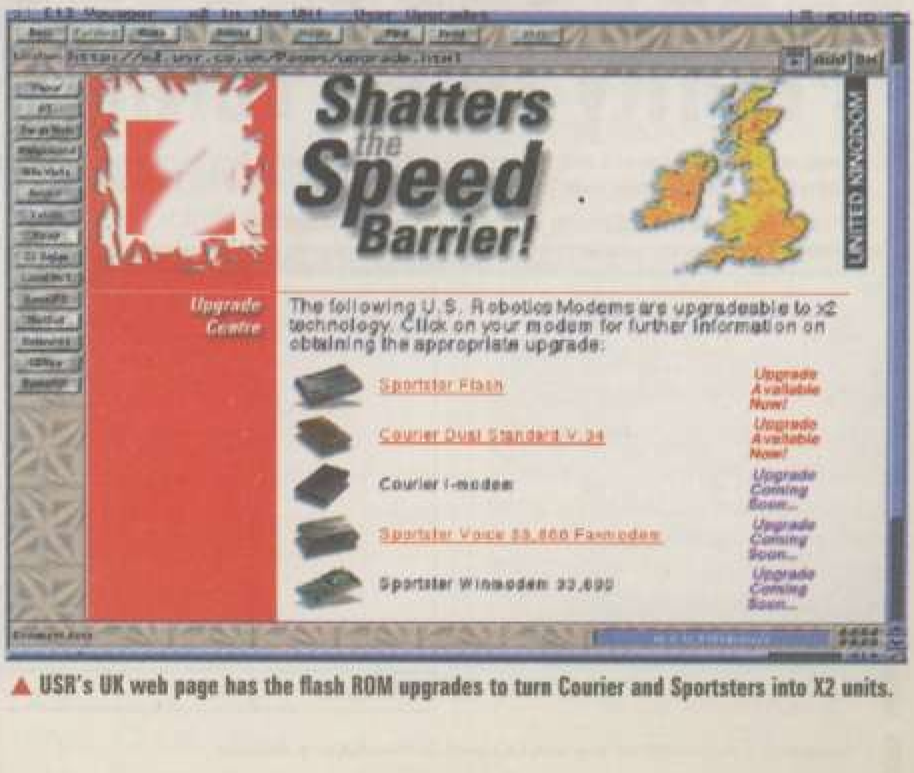
Mat Bettinson.

Those sites in full

Micromart
`http://www.micromart.co.uk`
US Robotics UK
`http://www.usr.co.uk`
HiSoft
`http://www.hisoft.co.uk`
NetConnect
`http://www.amigaworld.com/netconnect/`
Sarah Cox (or not)
`http://www.funny.co.uk/cuc/`


http://www.hisoft.co.uk/
HOME
PRODUCTS
WHAT'S NEW
DEALERS
CHECKOUT
BARGAIN SHOP
HiSOFT SYSTEMS
GO CINEMA 4D
REALTIME VIDEO WITH SOUND PLUS FRAMEGRABBER
VIDEOMASTER
ATARI ST AMIGA A500 AMIGA A600/A1200
the bargain shop is CLOSED
IT'LL BE OPEN FOR BUSINESS 6PM FRIDAY COME DO SOME WINDOW SHOPPING!
20,000 GIF & JPEG IMAGES
NET&WEB
ibrowse
email
ftp
YOUR EASY INTERNET CONNECTION

▲ **HiSoft's graphics heavy web page allows you to buy from their range of products online.**


Shatters the Speed Barrier!
UNITED KINGDOM
Upgrade Centre

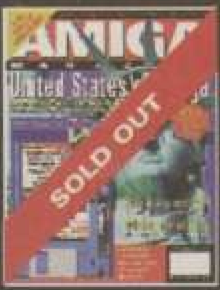
The following U.S. Robotics Modems are upgradeable to x2 technology. Click on your modem for further information on obtaining the appropriate upgrade:

Sportster Flash — Upgrade Available Now!
Courier Dual Standard V.34 — Upgrade Available Now!
Courier I-modem — Upgrade Coming Soon...
Sportster Voice 33,600 Faxmodem — Upgrade Coming Soon...
Sportster Winmodem 33,600 — Upgrade Coming Soon...

▲ **USR's UK web page has the flash ROM upgrades to turn Courier and Sportsters into X2 units.**

Back Issues

Looking for a specific Amiga article, game review, program, feature, tutorial, or even news story? Your search could well be over...



JUNE 1996
Disks: Termite demo & The Killing Grounds demo, plus 96 page net & comms guide
Features: Escom sells Amiga Technologies, publish your music
Inside: Modem round-up, Total Football & new Timekeepers disk reviewed

JULY 1996
Disks: XiPaint & Primal Rage demo
Features: A special report on what's happening in Europe, & news on Visorp & Pios
Inside: Image FX 2.6, Surf Squirrel, A4000 Tower, Primal Rage, SWOS Euro and more reviewed.

AUGUST 1996
Disks: EasyCalc (full program) & Valhalla III demo.
Features: The future of the Amiga with VIScorp, the new PIOS machine and the second part of the Euroscene feature.
Inside: Siamese Twin, Photogenics 2.0, Valhalla III and Tin Toy reviewed.

SEPTEMBER 1996
Disks: Vista Lite (full program) & a demo of Brian Lara Cricket '96
Features: The Aminet exposed. All 6 gigabytes!
Inside: Final Writer 5, OctaMED SoundStudio, Atapi CD-Rom drive. Plus an exclusive preview of the new AGA Worms.

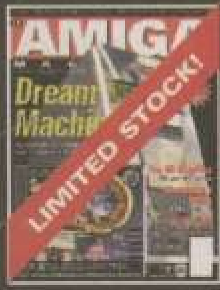
LIMITED STOCK!

OCTOBER 1996
Disks: Upper Disk Tools: ideal for sorting out those awkward disks and drives!
Features: The Amiga in America, Net software...
Inside: The speed issue, or something. Three top accelerators, a TCP/IP stack comparison & Capital Punishment

NOVEMBER 1996
Disks: XCAD 2000 - The premier 3D CAD package, plus Chaos Engine 2. CD-ROM or floppy edition
Features: Palmtop Amiga-Psion link-up
Inside: Opus 5.5, Delfina DSP sound card, Web Browser War, Alfa Quatro, CD-ROM writer

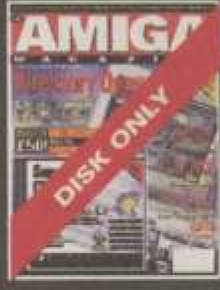
DECEMBER 1996
Disks: Wordworth 3.1 SE, Worms demo. CD-ROM or floppy edition
Features: CD-ROM drive for £50! Amiga and PC games on CD-ROM
Inside: Draw Studio, Apollo 1230, Storm C, Siamese RTG system, Tiny Troops

JANUARY 1997
Disks: CD-ROM or floppy edition, Imagine 4.0, Underwater Capers, plus over 100Mb of Imagine extras on CD
Features: Get a job in graphics, plus Imagine 4.0
Inside: Art Effect, PPaint 7, SWOS 96-97, Fighting Spirit, Chaos Engine 2 ...



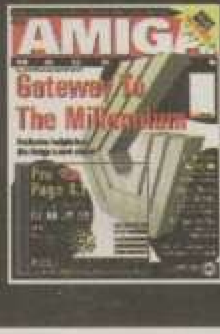
FEBRUARY 1997
Disks: Design Works, Minskies Furballs plus Worms – the Director's Cut extras and Imagine extras on the CD.
Features: The new A/Box
Inside: Wordworth 6 Office, Turbo Calc, Minskies Furballs, Bograts reviewed.

MARCH 1997
Disks: OctaMED SoundStudio (full program) Chaos Engine 2, Chaos Engine 2 AGA demo
Features: Turn your Amiga into a pro studio. Printers: problems solved.
Inside: Quickcam, Cybervision 3D, SMD 100, JetPilot reviewed

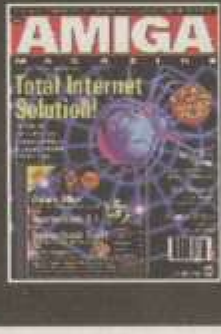


APRIL 1997
Disks: Directory Opus 5.11 (full program). Tiny Troops demo
Features: Build your own Tower Amiga Part 1. The 50 best Amiga Games
Inside: Massive Cinema 4D 3.0 Review, new DTP series, ProGrab Sampler, Teletext Decoder

MAY 1997
Disks: Image Studio (full program) Kargon RPG, exclusive clipart on CD
Features: The Future's Bright: Gateway buys Amiga! Tower Amiga Part 2.
Inside: PageStream 3.2, Big Red Adventure, LightWave 5, Epson Stylus 600...

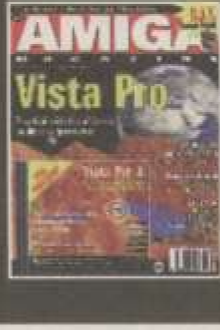


JUNE 1997
Disks: Pro Page 4.1 (full program) MPEGA 2.4, Sysinspector, The Sun game & more!
Features: CD-R for Amiga – cut your own CDs for a few hundred pounds plus Tower Amiga Part 3: Zorro.
Inside: Turbo Print 5, Net Connect, Cybervision...



JULY 1997
Disks: Free Net sofware, Quarterback 6.1 inc QB tools, Big Red Adventure
Features: Total Internet Solution, the history of the Amiga & a look at Amiga artist, Eric Schwartz.
Inside: Final Writer '97, Siamese RTG 2.0, Burn It...

AUGUST 1997 -
Disks: Dogfight, Turbo Print 5 Lite, Storm C Compiler
Features: Power PC is coming, Crack the Code, plus Power Gaming
Inside: Cinema 4D, Voyager NG 2.90, IBrowse 1.12 & Tower add-ons...



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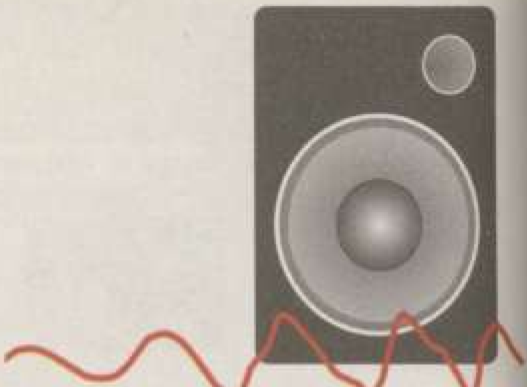
Sound Lab

First steps with Project XG and OctaMED SoundStudio.

Moving onto using MIDI instruments from within OctaMED is easier than you might think...



OctaMED SoundStudio is unique in the way it combines powerful Amiga sample-based tracker features together with MIDI sequencing. The MIDI side of things is quite often overlooked, but it is this which gives SoundStudio the ability to transcend the limitations of your internal audio hardware.

Unlike dedicated MIDI sequencers, SoundStudio gives acute control over Amiga samples as well as the ability to control an entire MIDI studio. If you've invested years in getting the best from purely sample-based tracks, opening up to embrace MIDI equipment will come as a breath of fresh air. In most situations, the best way to expand into the world of MIDI is with a multitimbral sound module, one that offers a range of different sounds, preferably with built-in drum kits and options to add reverb and other effects.

MIDI commands

For easy reference, here's a list of the MIDI specific player commands available from SoundStudio. Many of the standard commands also work on MIDI instruments.

03 and 13	**Set pitchbender (use signed hex)**
04	**Modulation wheel ($00-$7F)**
08	**Set hold only**
0A	**Polyphonic aftertouch**
0C	**Set volume**
0D	**Channel pressure**
0E	**Pan control**
10	**Send MIDI message (message no. -1)**
17	**Set volume controller**
1C	**Change MIDI preset**
31-3F	**Set MIDI assigned MIDI controller**

Please remember that the full SoundStudio manual is on this month's cover CD, so do check it out for further details.

If you don't intend to go all the way and build a complete studio, our DIY Project XG from the September issue is just perfect. This offers all of the above and more, requires no MIDI interface, no mixer and even combines your Amiga's audio output with its own to give a single stereo signal that can be channelled straight into your hi-fi.

Since OctaMED and SoundStudio allow you to enter notes from the Amiga's keyboard, you could also consider adding a MIDI module instead. This is a MIDI instrument with no keyboard of its own, which helps keep the price down.

Your first instrument

Whether you take the Project XG route or get hold of a standard MIDI instrument, the basic concepts of integrating your new gear with SoundStudio are the same. Basic control of a MIDI instrument from SoundStudio is simple.

First turn on the MIDI features by selecting MIDI Active from the MIDI menu. Click on the Props button from the Main Control panel. Next, enter a name for the instrument in the Name box, such as 'MIDI Test' for example. Now move the MIDICh and Preset sliders to select which sound you want to assign to this instrument slot, and which MIDI channel you want it to use (it's best to give each instrument its own MIDI channel, but not essential).

XG MIDI VOLUME
XG MIDI RESET
AMIGA PROJECT XG
AMIGA AUDIO IN

▲ **With Project XG and SoundStudio or OctaMED you've got an entire virtual studio that fits on your desktop.**

Your MIDI instrument's manual should have a reference section for you to match actual sounds with Preset numbers. Project XG users should refer to the charts starting on page 32 of the DB50XG manual. While we're at this stage, it's well worth remembering that most MIDI systems like to use MIDI channel 10 for drums although this isn't always the case.

Now try playing a riff on the Amiga keyboard to see if it's all working. If it is, you'll hear your MIDI instrument playing the notes you pressed. You can now go and set up more MIDI sounds in the remaining instrument slots. Remember, you can use up to 64 tracks of MIDI data now!

MIDI commands

Well that's the easy bit over with. The next thing is to take a look at the MIDI specific commands. These generally work like the standard player commands, but send MIDI data instead.

Many of the normal player commands will also work with MIDI instruments. Try taking a look at the online help to see which ones work with MIDI and which ones don't. In many cases you'll find your MIDI instrument has features which aren't directly supported by the player commands.

It's here where things can get a little bit on the sticky and technical side, but once you've got the hang of driving your own particular gear, you needn't go through the process too often. Take a good look at the User definable commands panel for a guide to customising your own commands. ■

Tony Horgan

User definable commands

One of the most powerful and flexible MIDI features of SoundStudio is the ability to assign commands 31-3F to any MIDI controller number. This allows you to access parameters of your MIDI instrument that would otherwise be out of bounds, or at least require lots of messing around.

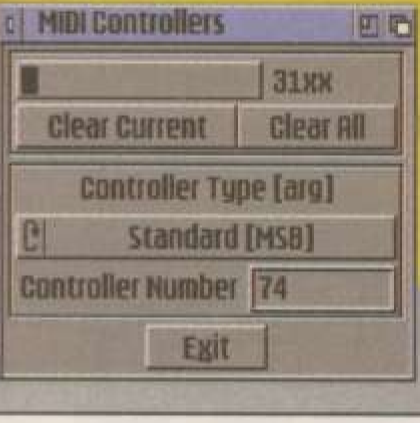
It's actually simpler to use than it first appears. From the MIDI menu, select Controller Commands. From here you can assign any MIDI controller number to the SoundStudio commands that range from 31 to 3F. For example, the Project XG sound card uses MIDI controller number 74 (decimal) for the filter cutoff (brightness) level that's used on specific instruments. To change the filter cutoff level, first you would assign a SoundStudio command to controller number 74 – command number 31 seems logical, as that's the first of the assignable commands. In this case, you would enter 74 in the Controller Number box (this is a decimal figure, as opposed to hexadecimal).

Now you can go to the tracker editor, input a sequence of notes and alongside the notes, enter some 31 commands. For example, this sequence would play a simple melody with a steadily opening filter on the lead sound:

Remember that SoundStudio also features additional command pages. This means that although that track now appears to be full of commands, you can still add more by moving to a new command page.

To add more command pages to a specific block, choose Set Properties from the Block menu, then increase the Cmd Pages value. You can cycle through the various command pages of a block using the Shift-Tab keyboard combination.

Using this technique you can add resonance changes, vary the amount of reverb or other effects, or perform any other change on the sound that your MIDI instrument will allow.

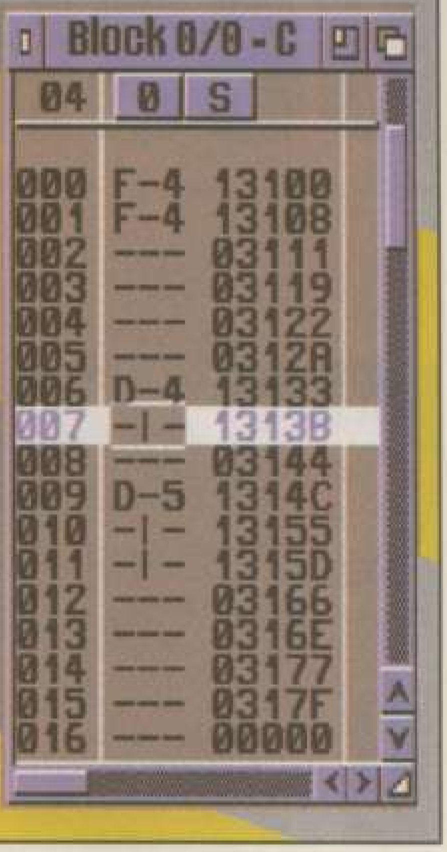


31XX

Controller Type [arg]

Standard [MSB]

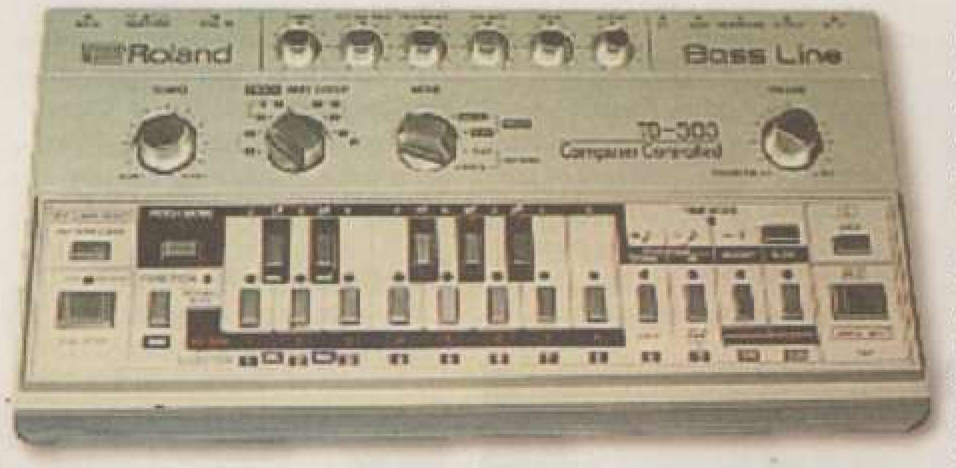
Controller Number 74



```
04  0  S

000 F-4 13100
001 F-4 13108
002 --- 03111
003 --- 03119
004 --- 03122
005 --- 0312A
006 D-4 13133
007 -|- 1313B
008 --- 03144
009 D-5 1314C
010 -|- 13155
011 -|- 1315D
012 --- 03166
013 --- 0316E
014 --- 03177
015 --- 0317F
016 --- 00000
```

TB 303 Emulator



▲ **The real thing: Roland's TB 303 synth is much sought after. Now you've got one of your own!**

See page 9 for a quick introduction to this month's cover mounted TB 303 Emulator, with a guide to the knobs and buttons on the control panel. This issue is so packed that we're squeezing the rest of the operating instructions here in Sound Lab... So it's on with the acid then.

The simplest way to use the emulator is in single note mode, in which you can adjust the controls, render a note and then save it out as a sample. Have a go: just hit the Render button straight away once you've started it up. You'll see a sequence of waveforms on the screen as the software simulates the synthesis circuitry of the TB 303 to make a sample. To hear the sound, click the Play button. If you like it, use the Save button.

Now try making a different sound by turning the knobs. The Cut Off and Resonance controls make the most obvious difference to the sound. With the Cut Off turned to the left, only low frequencies will be allowed through the filter. Turn it the other way to open up the filter to higher frequencies. Resonance 'excites' the sound, boosting the amount of activity in the frequency set by the Cut Off knob. If you want the Cut Off value to fall as the sound is sustained, turn the Envelope knob right. The Decay knob sets the length of your note, while the Accent control doesn't do very much. The official 303 manual merely says it controls the amount of accent on the sound (how useful). See what it does for you.

Script mode

There's a tracker mode planned for future versions of the program, but for now, one way you can make sequences is with the use of the script functions. This sounds a bit techie, and it is, but you can get the gist of it by looking at the example scripts. To render a sequence from a script, click the Script button and select one from the list in the file requester. Once you click OK the script is rendered automatically. This takes longer than rendering single notes of course. Use the same Play button as before to hear it.

If you return to Workbench (using Right Amiga and M) then load the same script into a text editor, you'll see it consists of a sequence of lines, each one representing a different note. The letters and numbers on each line specify the amount of resonance, cut off frequency and so on for each note.

Alter some of the values and re-render to see what does what. Don't worry if it's like a lesson in programming. Future revisions should make the sequencing process a lot easier.

Slide Charlie Brown

Another of the 303's characteristics is its ability to slide from one note to another. You can do this too using the Glide controls. The Level knob sets the pitch range of the glide, while the Up Down switch selects the direction of the slide (although upward slides do tend to come out a little bit on the strange side). ■

Tony Horgan

Want more info?

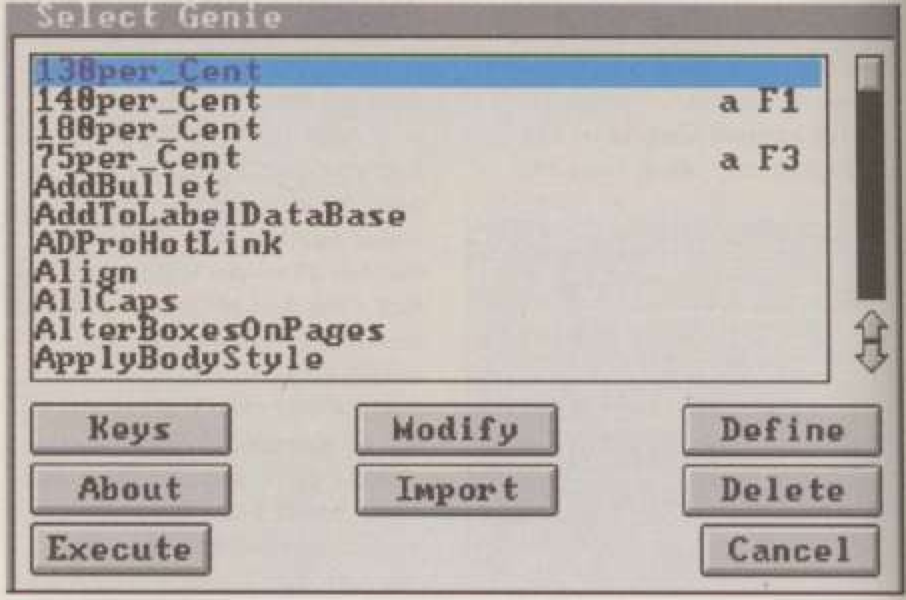
You can download scans of the original Roland TB 303 Bassline user manual from a link at www.teknet.ch/tb303.htm. This is an unofficial 303 homepage with lots of info on the silver box. If you have any comments or suggestions you want to make to the author, Jeroen Schellekens, you'll find his address in the ReadMe file. Thanks Jeroen!

Desktop Publishing

Professional Page 4.1

PART 6

It's Pro Page time again. This month we're going to be discussing how the Genie tool works and how Pro Page uses ARexx.


Select Genie
130per_Cent
140per_Cent a F1
100per_Cent
75per_Cent a F3
AddBullet
AddToLabelDataBase
ADProHotLink
Align
AllCaps
AlterBoxesOnPages
ApplyBodyStyle
Keys
Modify
Define
About
Import
Delete
Execute
Cancel

▲ The Genie tool is a star feature of Pro Page that can make light work of heavy tasks.

One of the most under used functions in Pro Page is the Genie tool. It seems that a few Pro Page users don't fully understand what the tool is and therefore never get to see the real benefits provided. This month, I'm going to explain a lot about Genies in the hope that this tool is better understood, and used to its full potential.

A Genie is simply an ARexx script. Plenty is written about ARexx in books and magazines, so I won't try re-inventing the wheel by giving an ARexx lecture. What I will show you is how Pro Page takes advantage of ARexx, as well as giving you a head start by showing how simple it is to write your own Genies.

First things first

Before you can make use of the Genies in Pro Page, you will first need to install a vital part of the Genies system that didn't make it onto the CU Amiga cover disks and-cover CD.

Those who have the CD edition of this mag will find the relevant parts in the Magazine drawer. Follow the documentation on the CD to perform the installation. A Genies disk is also available free when you buy a Pro Page manual or a package called GenieHeaven from LH Publishing. This package also includes a booklet containing the ARexx commands used by Pro Page to help you create your own Genies.

To install new Genies, all you need to do is to copy them to where ever REXX is assigned. This will default to the S directory of your System, so put them there unless you have made your own REXX assigns.

The next important point is to make sure that Rexxmast has been run from your User-startup or Startup-sequence. You can find this out by opening a Shell window and entering Status [Return].

This shows a list of processes that are currently running and Rexxmast will be listed if it has been started. If it doesn't show up, you can start it manually by double clicking the Rexxmast icon in the Workbench:system/ drawer. Drag this icon into the WBStartup drawer to have it launched automatically during boot-up.

Dreaming of Genie

In the years I have been using Pro Page, I've been able to benefit from many types of Genies including fairly simple ones that let me tell Pro Page that I want to view a whole page or the full width of a page on the screen.

Other Genies let me apply Style tags (see last month's issue) to selected text using the keyboard, making the job of formatting text so much easier than the applying of tags manually.

One Genie divides a text box into columns of equal width while letting the text flow between the boxes. Another scales a bitmap image so it completely fills a box. Also there's a Genie by the name of DeleteRange which lets me delete a selected range of pages.

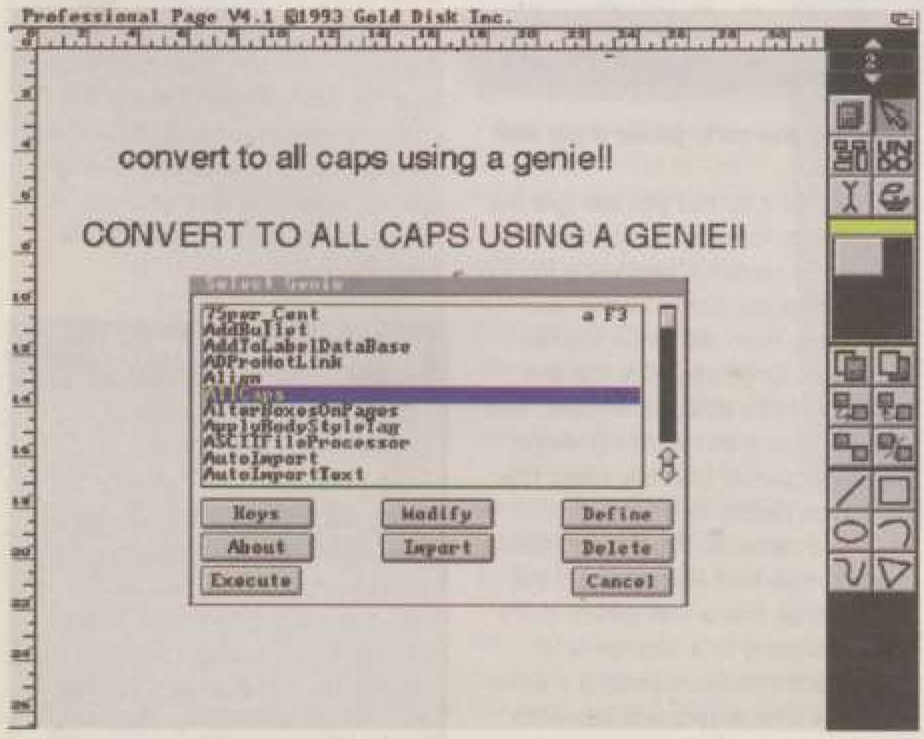
Even more useful is 'Copy box to Pages' which will allow me to select a box and have the program copy that box to a range of pages – odd, even or both!

How do they do that?

On the most simplistic level, a Genie is merely another way of communicating with Pro Page.

Instead of using a keyboard short-cut or a menu item, genies enable you to talk to the ARexx commands built into Pro Page in a way that is more user friendly than any other program I've laid eyes on either before or after Pro Page was released.

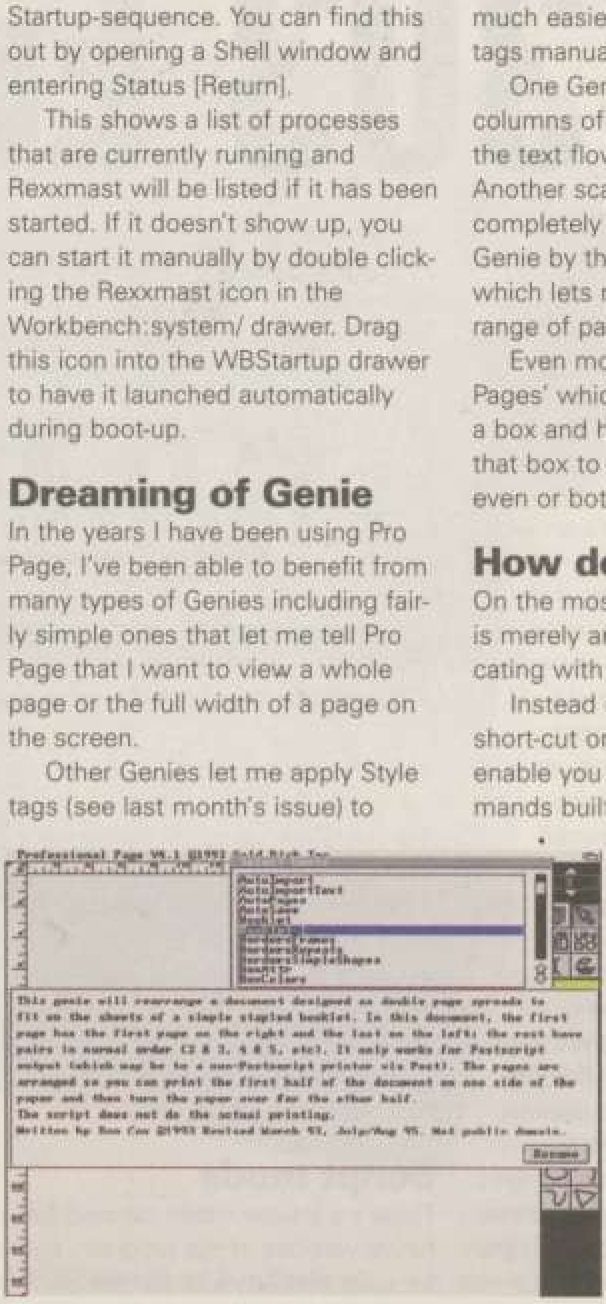
To see what I mean, you need to look at the Genie tool. When you click on the Genie icon (under UNDO), a panel appears on your screen. This panel has many buttons which will enable you to do various things with Genies. The button I like to use


Professional Page V4.1 ©1993 Gold Disk Inc.
Select Genie
75per_Cent a F3
AddBullet
AddToLabelDataBase
ADProHotLink
Align
AllCaps
AlterBoxesOnPages
ApplyBodyStyleTag
ASCIIFileProcessor
AutoImport
AutoImportText
Keys
Modify
Define
About
Import
Delete
Execute
Cancel

convert to all caps using a genie!!

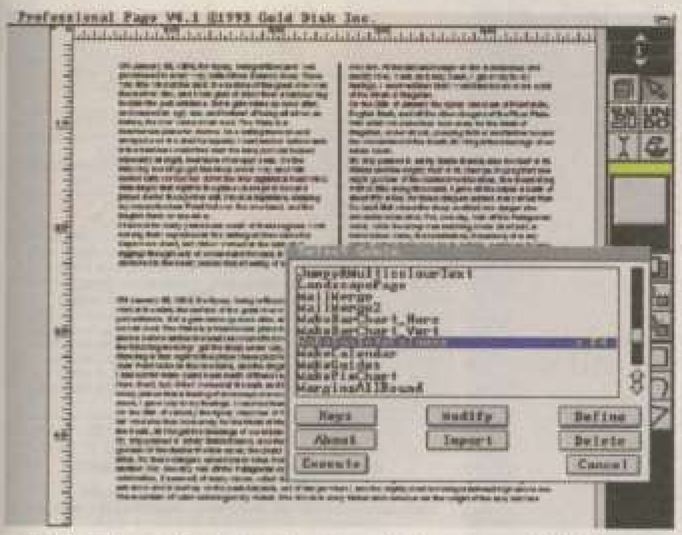
CONVERT TO ALL CAPS USING A GENIE!!

▲Genies can be used to convert lower case text to upper case. This can be made even easier by assigning a keyboard shortcut to such a Genie.

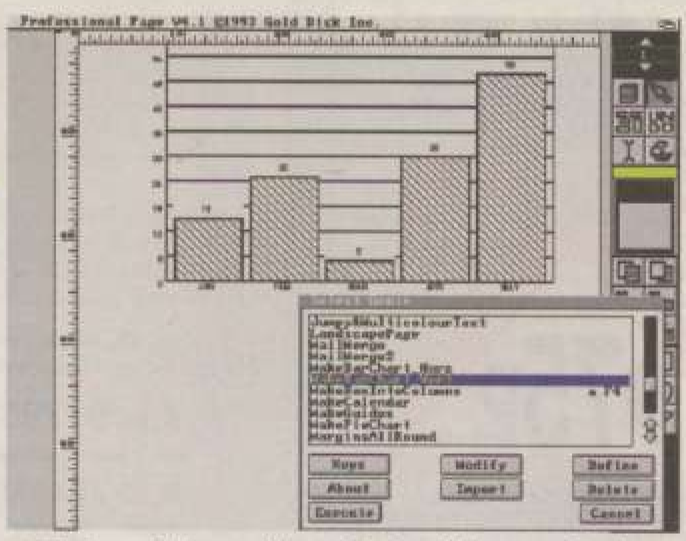

Professional Page V4.1 ©1993 Gold Disk Inc.
AutoImport
AutoImportText
AutoPages
AutoSave
Booklet
BordersFrames
BordersRepeats
BordersSimpleShapes
BoxInfo
BoxColors

This genie will rearrange a document designed as double page spreads to fit on the sheets of a simple stapled booklet. In this document, the first page has the first page on the right and the last on the left; the rest have pairs in normal order (2 & 3, 4 & 5, etc). It only works for Postscript output (which may be to a non-Postscript printer via Post). The pages are arranged so you can print the first half of the document on one side of the paper and then turn the paper over for the other half.
The script does not do the actual printing.
Written by Don Cox ©1993 Revised March 93, July/Aug 95. Not public domain.

▲ 'Booklet' from Don Cox is my all time favourite Genie and is a must for those of you with a PostScript printer.


Professional Page V4.1 ©1993 Gold Disk Inc.
Keys
Modify
Define
About
Import
Delete
Execute
Cancel

▲ 'Make Columns' lets you take a box of text and convert it to two columns, along with a line dividing both boxes.


Professional Page V4.1 ©1993 Gold Disk Inc.
Keys
Modify
Define
About
Import
Delete
Execute
Cancel

▲ This is one of the more elaborate Genies which creates a bar chart including the labels for the various bits and pieces.

A few commands...

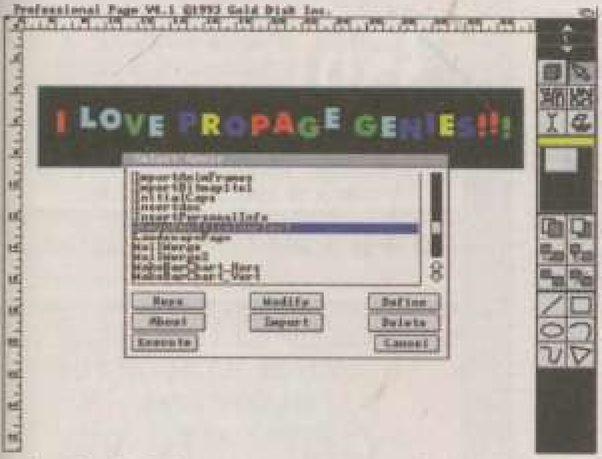
To get you started, here are a few commands that you can try using in your own Genies.

`call New()`
Same as selecting Project/New

`call SetMagMode()`
Place a figure within the brackets, such as 140 to achieve 140% magnification of the page. Try using this to create Genies that will let you view a full page or full width of a page.

`call SetTextColor()`
Insert the name of a colour from the current Colour list. Remember to make sure of your spelling – there is no U in color.

`call SetFont()`
Insert the required font name between brackets.


Professional Page V4.1 ©1993 Gold Disk Inc.
I LOVE PROPAGE GENIES!!!
Keys
Modify
Define
About
Import
Delete
Execute
Cancel

▲ Here's a Genie that spruces up your text by altering the colours and the vertical positions of the letters.

most is Keys. This lets you assign a key stroke to a Genie, using either a Shift-Alt-Function key or more simply, an Alt-Function key combination.

This gives opportunity to create up to twenty Genies with keyboard short-cuts for them. Click on the Keys button, and then press the keys that you intend to associate with the selected Genie, such as Alt-F1 or Alt-F2.

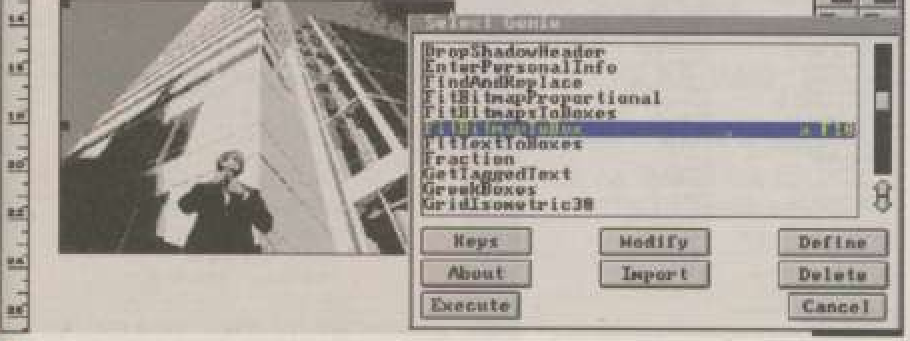
Below the Keys button is About and this is a truly unique feature where Pro Page tells you what the selected script does.

It does this by taking the comment from within the script and displaying it in a window. This is so cool, I wish every ARexx capable Amiga program had it.

At the bottom of the panel is a button labelled Execute. This is the one you click on to run a selected script.

Moving to the middle of the panel, the top button labelled Modify is used to change a script. Click on it and you will find a new screen appearing which is the editor for Pro Page Genies.

Import is a button which enables you to import a Genie into Pro Page that is not in the drawer assigned to Rexx. This lets you make use of Genies created while you're in the middle of working on a document. In other words, it's not necessary for you to shut down and start again when using a new Genie that wasn't in the Rexx drawer when you first started Pro Page.


Professional Page V4.1 ©1993 Gold Disk Inc.
Select Genie
DropShadowHeader
EnterPersonalInfo
FindAndReplace
FitBitmapProportional
FitBitmapsToBoxes
FitTextToBoxes
Fraction
GetTaggedText
GreekBoxes
GridIsometric30
Keys
Modify
Define
About
Import
Delete
Execute
Cancel

▲When you import a picture it doesn't always fill the box you have created, but with the help of a Genie it can be made to do this – saving a lot of time and work.

On the right of the panel are three other buttons: Cancel, Delete and Define. Note that Delete not only removes a script from the window, but removes that script from disk. The final button, Define, is used to create new Genies of your own.

Write your own

To create your own Genie, click on the Define button. You'll be faced with a blank page in the Genie editor. Now look at the sample screenshot for ApplyBodyStyle (below).

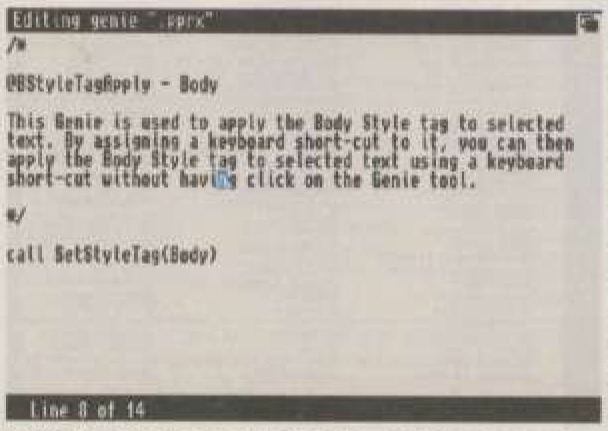
On the first line there are two symbols ('/' and '*') which are there to say that the following text is merely a comment to explain to the user what the Genie does. In other words, to tell Pro Page to ignore this bit of the script. The text used in this first comment is also displayed when you select the Genie and click on the About button.

To end the comment, the same two symbols are used but in reverse order (*/). As you can see, this Genie only has one command line. In this case the command calls the Style tag 'Body' and applies it to selected text. The format of the command is 'call SetStyleTag(Body)'.

For this to work, there first needs to be a Style tag called Body. As you've deduced, the name of the style tag is the word inserted between the brackets, and the Pro Page ARexx command is 'SetStyleTag'.

This is just one of more than 330 commands in Pro Page. The word Call is simply a piece of text that not only precedes the command but is recognised by Pro Page as a 'call' to carry out that command. Once the text and commands have been entered, choose Save As from the Project menu. A requester will appear on Pro Pages screen asking you to name the script as you would so wish.

After it's been saved, go back to the editor and choose Return. You'll be asked to name the script. This also saves the file to disk again, meaning you didn't need to use Save As earlier, but when working on long and involved scripts, it is always best to save your work in case of any crashes etc.


Editing genie ".pprx"
Line 8 of 14

```
/*

@BStyleTagApply - Body

This Genie is used to apply the Body Style tag to selected
text. By assigning a keyboard short-cut to it, you can then
apply the Body Style tag to selected text using a keyboard
short-cut without having click on the Genie tool.

*/

call SetStyleTag(Body)
```

▲ This is a simple example of an ARexx script you can use to apply style tags to selected text.

Once the script is named, assign it to a key press, and then think about the many other Genies that you could be creating.

In next month's issue we'll be looking at text entry using Pro Page's Article Editor. It can be used for many things from creating text for your page to editing your User-startup. ■

Larry Hickmott

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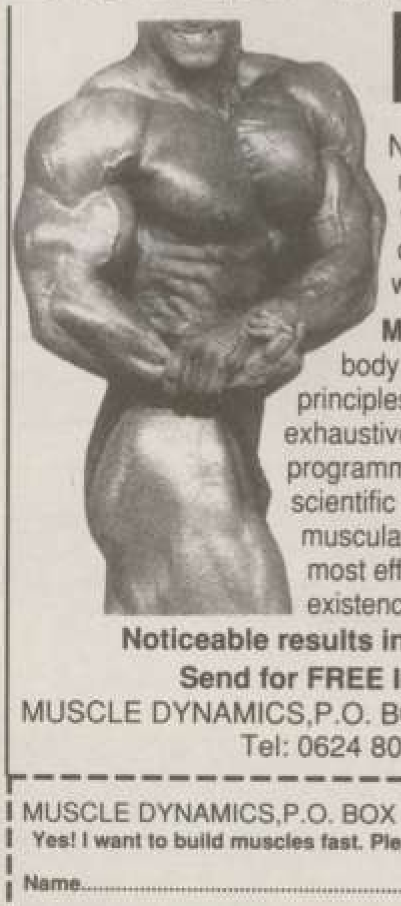

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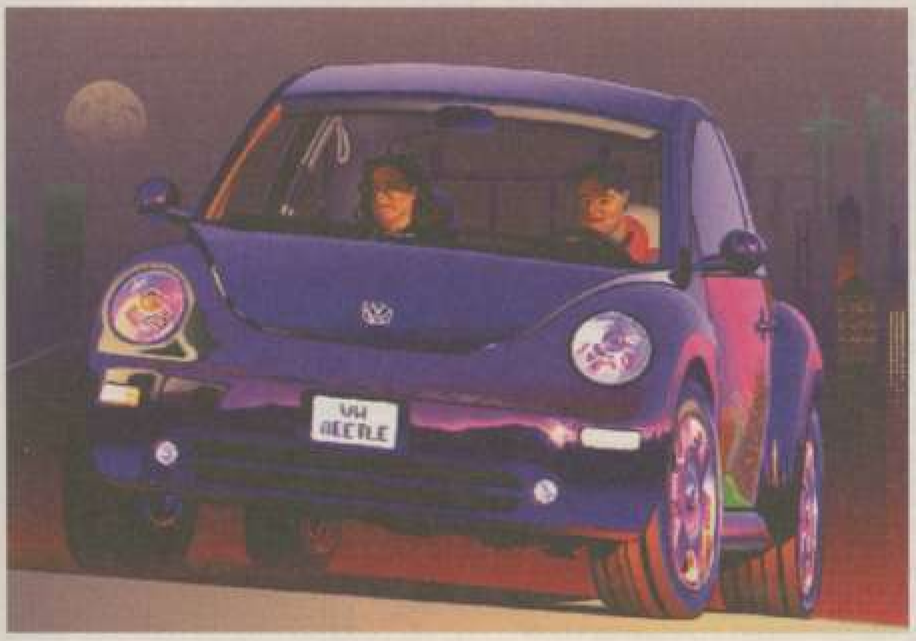

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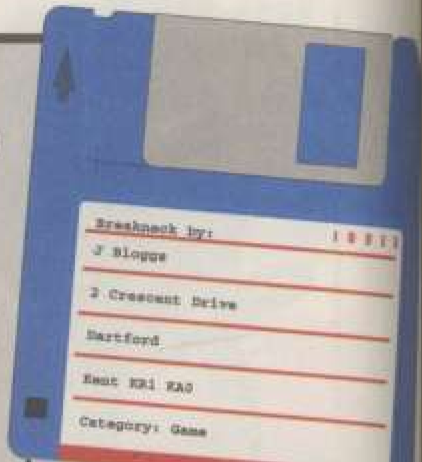

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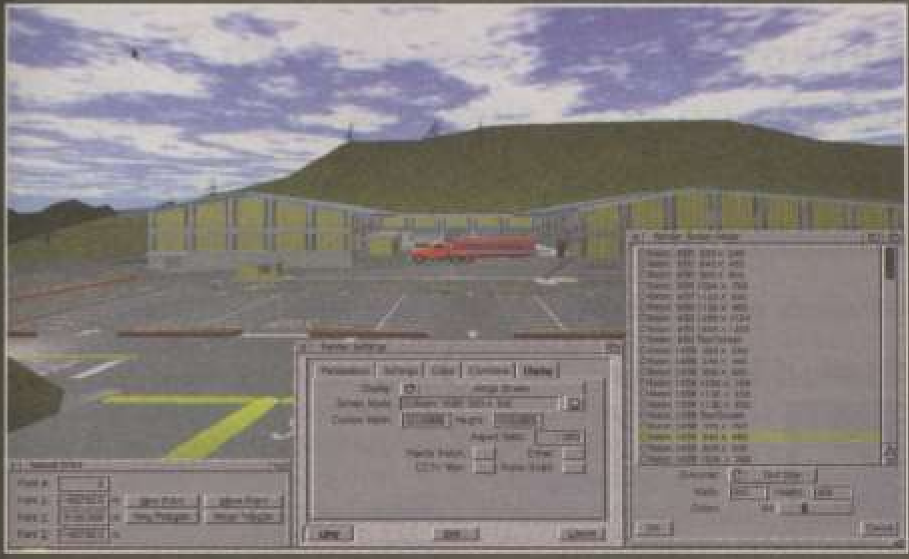
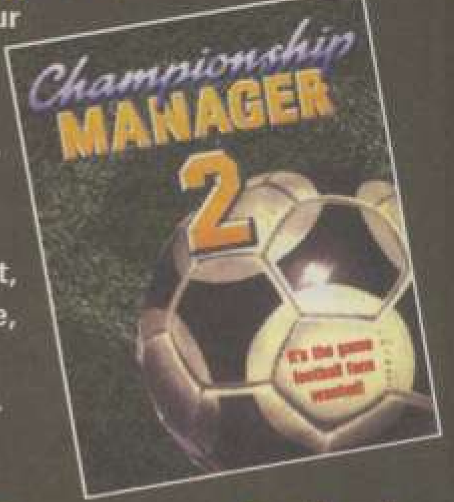


Aladdin 4D

Yes, we told you we'd have it a couple of issues ago, but apparently it was held up at the last minute. Anyway, we've got it now, but it arrived too late for review in this issue. We can tell you it's looking like it could be the hottest 3D rendering package the Amiga has ever seen, but you'll have to wait until the next issue of CU Amiga for the full story...

Championship Manager 2



No really! We're not pulling your leg. The elusive football management game is being duplicated and put into shiny boxes, ready to be posed temptingly on a high street shelf near you. It's about time we had a decent, up to date footy manager game, but we won't be pulling any punches in our in depth review.

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Q&A

No matter what the level of your technical problems, if you put them to our experts they'll try their best to fathom things out. Also, please remember to provide us with as many details on your systems and problems as possible, to help us in helping you.

Logos

Mysteries and meanings ...

WORKBENCH	Solutions to those everyday troubles with your Workbench.
EXPANSION	If you need help getting more from your Amiga, just ask!
COMMS	All your Internet and general comms problems swiftly solved.
SOUND	Trouble making your Amiga sing? We've got the answers here.
HARDWARE	Technical matters beyond the scope of plug-ins and plug-ons.
SOFTWARE	Answers to queries on particular pieces of software.
HELP	General queries which just don't seem to fit in anywhere else.
CD-ROM	Specific help with CD-ROM solutions and driver problems.
GRAPHICS	Problems with art and design? Help and advice is at hand.
PERIPHERALS	Printers, monitors, we'll solve your peripheral blues for you.

Printer problems

Please can you help me with my Citizen ABC printer? Whenever I try to print anything the characters 4,FPVHxTRp02 are printed and the paper is ejected. I have tried several ways of curing this problem, eg: different drivers, different parallel cable, print manager programs, and even a different printer.

Sometimes during these attempts the printer suddenly works fine and keeps on working for the rest of the session, but the next time I use the printer the problem returns, even after trying the cure that appeared to work. I have even tried the Shell command copy >PAR:, but the characters typed on the keyboard do not appear correctly on the printout. I would be grateful if you could solve this problem.

Alan Pike, Swindon

As you say you have changed the cable, printer and software with no effect, the logical conclusion would be that your computer is at fault. The symptoms that you describe could well be a dodgy parallel port, but one thing makes us a little suspicious.

The fact that when it starts working it stays working until the end of the session indicates that this may well be a set-up issue after all. The string of characters is a characteristic of a printer being sent foreign control codes. One possible explanation is that when it starts working you are getting something right by trial and error and not saving it. Make sure next time it starts working you save all your printer prefs!

A bit of a shot in the dark this, but we do believe that the Citizen ABC has a miniature DIP switch setting inside which allows you to select between IBM Proprinter and Epson control codes. Make sure that your printer driver and your DIP switch settings tally up.

Stalled installer

After successfully building a tower system following your excellent 'Build Your Own Tower' article in the April issue of CU Amiga, I used ATAPI Plug 'n Play to get my CD-ROM working. After extracting I went to install and got the message 'Unable to open the tool installer'.

Do I have to replace my OS chip or order a new set of Workbench disks as I believe mine to be corrupt? Please advise, I desperately want to use my CD-ROM drive.

Michael Ward, Wiltshire

Unless you have some other reason for thinking that your Workbench disks might be corrupted, then you are OK. A word to the wise – back up your Workbench disks immediately. Go on, do it right now.

As to your query, it sounds like you simply do not have a copy of installer – or possibly have a very old one – in your C: directory. Grab one from a recent CU cover disk and copy it into C: and all should be OK!

Hardware hacks

1. I have an A1200 with an 85Mb hard drive, 4Mb trapdoor expansion and a SCSI CD-ROM drive, and I am currently modifying my Amiga's housing to suit my needs. I am using an A500 power supply and moving the motherboard into another unit but to do this I need to use another keyboard. I have an A2000 keyboard with a 5 pin DIN plug at the end. Could you tell me if it's possible to wire it to my A1200 and if so how, what parts I would need, and where I can get them from?
2. Could you also tell me if it is possible to wire up an internal A2000 floppy disk drive as an external one for my A1200. If so can you show me a wiring diagram?

K. Robinson, Hull

1. When you say you are moving the motherboard into another unit, I guess you are talking about a tower case, so you really ought to look at the DIY tower articles we ran in the April, May and June issues. For the keyboard question, see this month's Tech Tip on page 98.
2. It's possible, but you'd have to construct a custom designed 23 pin D-type to 34-way IDC plus power connector, which requires lots of fiddly cutting and soldering. You'd also then have to find a case and figure out some type of blanking plate, plus some way of hold-

ing the eject button in place.

I think you'll save yourself a day's work buying an external drive, and it will probably cost about as much as the DIY version.

The boot don't fit

I have an Amiga A1200 with a hard drive and a 4Mb upgrade. Up until now it has always booted with the Workbench screen, but now it only boots with the DOS screen. Can you tell me how to get the Workbench screen to boot instead of the DOS screen?

A Hall, Edmonton

What's happened is that your computer is no longer running the entirety of its startup-sequence file. This is a text file found in the S: directory of your hard drive which gives the computer a list of commands to do every time it boots up. Just about the last thing that is likely to be in your startup-sequence are the lines:

```
LoadWB
Endcli
```

These lines, logically enough, load Workbench, and then end the CLI (DOS) Shell that you get on start up. If you type these lines in when you boot up into DOS, you should then find that Workbench will appear.

Two things may have gone wrong with your startup-sequence. Firstly, it might have been deleted, or secondly it might have called on some piece of software which you have recently deleted and it's getting stuck at that point. If the latter is the case, an error message will appear on the DOS screen. Either situation can be rectified by replacing your startup-sequence with the original one from your Workbench floppies. Boot up to that troublesome DOS prompt, stick the Workbench disk in and type

```
copy df0:s/startup-sequence
to sys:s
```

Of course if you have customised your startup sequence in any way you will lose the customisation. You could try editing your startup-sequence and removing the line which any error messages suggest is at fault.

Where's the cards?

Referring to your recent article on Zorro slots and sound cards, I rushed out and bought a Zorro bus board and then went on to phone Macrosystem and Albrecht Computer Technik. God knows what my phone bill will be like! So: Macrosystem no longer make the Tocatta sound card. In fact they have stopped support for the Amiga completely. Albrecht Computer Technik can sell me the Prelude, but it will not work with OctaMED, as it is apparently a 'dead' product. I have also had a highly offensive letter from RBF Software about their opinion of Amiga users, so no help there then (ie, there is no AHI driver for it). I would consider Petsoff's Delfina, if it is my last option, but I cannot find the phone number.

So CU Amiga, please help me. I have a Zorro'd up Amiga, and £300 more than burning a hole in my pocket. Can you suggest any options? Can you give me a contact for any sound card manufacturers? If all this fails are there any trackers which will work where the 'dead' OctaMED fails? Please help me here. I am desperate to fill one of my Zorro slots with a sound card, any sound card. Macrosystem suggested trying the second hand market for a Tocatta, but wouldn't that be just as difficult?

Justin Tuijl, Norfolk

We reviewed Delfina in the November 1996 issue of CU Amiga, so dig that out if you need major info on it. For now, here are the contact details for its suppliers Petsoff. Fax: 00 358 5 452 3347 or 00 358 5 451 5223. E-mail: petsoff@sci.fi. They don't list a phone number. If you are still after a Toccata you could try White Knight Technology on 01920 822 321. Toccata was reviewed in the April 96 issue of CU Amiga. Tracking down a second hand Toccata could prove difficult as they were never promoted to any great degree in the UK but it's well worth looking. The third option is to locate a Maestro Pro card, which also came from Macrosystem.

No more fuzzy samples

The most common audio related query we get is about poor sampling results. For one reason or another, people are forever being frustrated by samples that are poorly recorded: muffled, hissy, grainy, scratchy, too quiet or too loud.

Sampling using an 8-bit system in less than laboratory conditions is considered a bit of a minefield to say the least, with threats from electrical interference, bad sources, poor connections, sample rate mix ups and the like, all conspiring to mash up your sounds into one big fuzzy mess.

However, now that CD-ROM drives are cheap and readily available, you can all but consign your sampler to the scrap heap, instead taking your sounds from CDs in a neat direct digital-to-digital transfer.

There's no need to buy special CD-ROMs with sounds already sampled in WAV or IFF formats. You can simply take any audio CD, and with the right CD-ROM driver and software, you can suck digital audio straight off of the CDs for you to use in your personal creations.

The ATAPI Plug 'n' Play software comes with a tool called TRKDownload. TRKDownload won't work with all CD-ROM drives, but it's freely available from our cover CDs, Aminet and public domain suppliers, so it won't cost you anything to check if your drive is compatible.

Zip Vs CD-ROM

I need some advice regarding storage. Up until recently I was firmly set on purchasing an 8 speed CD-ROM drive as the next peripheral for my Amiga, but then I started to consider the possibility of adding a Syquest Zip drive instead.

I'm dying to use CD-ROMs such as your CUCDs with my Amiga without having to borrow other people's CD-ROM drives, and if I decide to go for the CD-ROM drive first I'd like to know if there is really that much difference between a 4x and an 8x drive. I want to get it as soon and as cheap as possible.

If I had an external Zip/Syquest could I use it on my PC as well? Would the large storage capacity enable me to download lots of software from the Aminet on my PC, and then plug the drive into my Amiga and copy the software onto my hard drive or use it directly from the cartridge?

A friend told me of a device that reads both CD and data cartridges. I found out that it was called Multidata and cost a whopping £650. This was a little while ago – is it still available and has it come down in price yet?

John-Anthony Phillips, Staffs

In practical terms, an 8x CD-ROM is twice as fast as a 4x. In day to day use, that's not particularly significant. However you will probably find it hard to buy a 4x drive these days. 8x ones have dropped in price quite dramatically – we've seen them under £40 – and 4x is almost too cheap to sell.

Yes, you can use Zips and Syquest units with PCs or Amigas. You'll have to format the disks in PC format and mount them on your Amiga using CrossDos and an appropriate mountlist. Aminet is full of PC mountlists and general help in mounting Zip disks for cross platform use. Syquest may be more work tracking down, but should also produce few problems.

With a CrossDos mountlist you can happily use the same disk in your Amiga and your PC – which is excellent, as you suggest, for Aminet downloads.

As for which to get, they offer very different things. Downloading the contents of an Aminet CD would take a

◀ Zip drives are great, but so are CD-ROMs. Which should get your cash? See 'Zip vs CD-ROM'.

good day or two on a decent modem, and there's no way any mags are going to cover mount Zip disks. If you want an excellent storage/back up solution, we would advise Zip and if you want huge quantities of brilliant software cheap, go for CD. Shop around and you may be surprised how cheap they can work out – you might be able to afford both.

As for the Multidata? A vague shadow of a memory – not a path worth exploring.

Basic error

Once upon a time I had an A500 and I wrote myself a simple program in Amiga BASIC which I use to simulate cash-flow through a bank account. I now have an all singing all dancing A1200 but the program will not run. I have tried it from floppy disk, using the Workbench installed on the hard drive, but the machine keeps telling me either that it is 'unable to open your tool Amiga Basic' and/or 'Out of Heap space'. I would like to continue using the program through the hard drive but without the hassle of having to load Workbench 1.3 from floppy, or installing it on the hard drive. Is there an easy fix, like installing BASIC on the hard drive, or will I have to rewrite the program in another language, and if so, which one shall I use?

PJ Bryant, Dorset

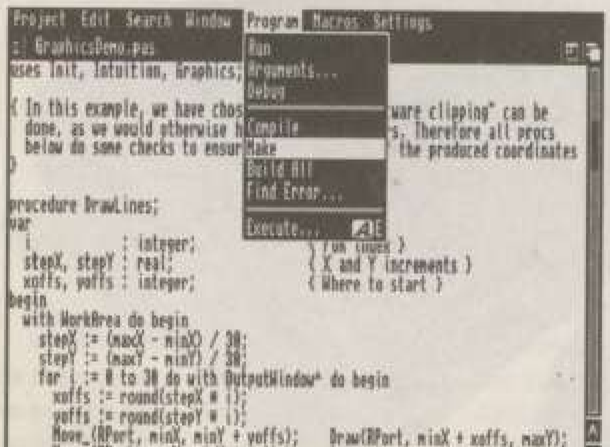
If you are clicking on the program icon, it will try to load Amiga BASIC up and then run the program within that. When you saved your program originally, the icon would store the path that it originally found your BASIC on. If you copy BASIC to your hard drive, for the sake of example to a drawer called BASIC on a hard drive called WORK:, then you'd have to click on the icon, select Icon/Info from the menu options and change the path in the default tools option from something like AmigaBasic:Abasic to Work:Basic/Abasic.

However, that creaky old Amiga BASIC sometimes falls down on an A1200. Recompiling it into AMOS or preferably Blitz Basic should be very easy, as Amiga BASIC did not have much in the way of non standard commands. Blitz Basic is currently on re-release from Guildhall, and most stockists should either have it or be able to get it for you. I suggest you get your hands on ab2ascii-1.3.lha and ptchAmigabasic.lha from aminet/dev/misc. These are two invaluable tools for getting old Amiga BASIC programs to work on modern Amigas. If you do not have a modem, ask your local PD library to get them for you or check in the Magazine drawer on this month's CD.

Bars & Pipes & Pascal

I have had my Amiga 1200 for three years, so I am not a beginner to the Amiga scene but, I have been out of it for a long while (about 12 months). I would appreciate it if your talented staff could answer my questions.

1. In September I will be starting college and will be doing a computing course which involves programming in Pascal. Would it be possible to use a double density disk and format it using the PC0 DOS driver so I could swap files between the PC at college and my A1200 at home, and also to continue the programming at home? What software would you recommend? I have seen HighSpeed Pascal advertised in HiSoft's advertisement. Is this any good? What kind of language is Pascal, and what sort of things is it able to do?



```
uses Init, Intuition, Graphics;

{ In this example, we have chos             ware clipping" can be
  done, as we would otherwise h            s. Therefore all procs
  below do some checks to ensur              the produced coordinates
}

procedure DrawLines;
var
  i              : integer;                  { on lines }
  stepX, stepY   : real;                     { X and Y increments }
  xoffs, yoffs   : integer;                  { Where to start }
begin
  with WorkArea do begin
    stepX := (maxX - minX) / 30;
    stepY := (maxY - minY) / 30;
    for i := 0 to 30 do with OutputWindow^ do begin
      xoffs := round(stepX * i);
      yoffs := round(stepY * i);
      Move_(RPort, minX, minY + yoffs);    Draw(RPort, minX + xoffs, maxY);
      Move_(RPort, maxX, minY + yoffs);    Draw(RPort, maxX - xoffs, maxY)
    end
```

▲ **Pascal in rip-roaring action... maybe not the most exciting thing in the world, but it's how they teach computing.**

2. My dad is a solo artist (singer), and has recently purchased a Roland MIDI file player and has started to purchase standard MIDI file tracks. I have Music X version 1.1 and have converted his tracks into Music X files using the Music X-to-MIDI program. However when I try to play these tracks on Music X the clock counts but no sound can be heard. Do I need a MIDI interface to play them? It is not the switch on the RF modulator. What sampler would you recommend in the 16-bit genre, (below £150)? Also could you please tell me what is the most recent/ best version of Bars and Pipes Professional and how could I get hold of a relatively cheap copy of it?

3. Lastly, I have just had an 80Mb 2.5 inch IDE hard drive installed in my A1200 but have a lot of problems with software crashing. It never did this on floppy disks. What's wrong?

I hope you continue producing this magazine even though the Amiga is arguably in its worst state. Your magazine is the best by a long way. Thank you.

Steven Houghton, Lancashire

1. Yep, swapping files between PC and Amiga is a doddle. If you want

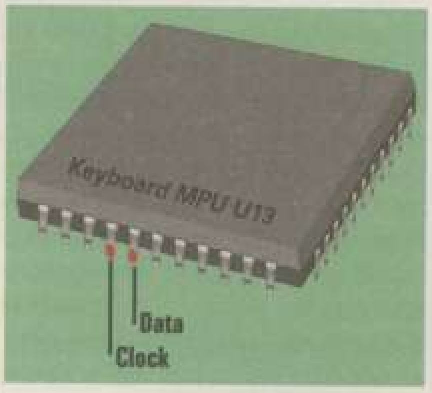
A1200 Keyboards

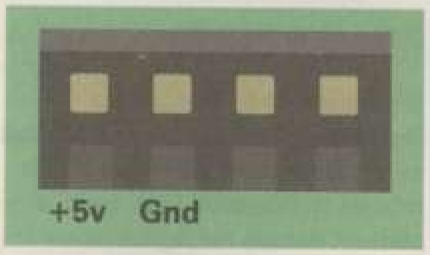
The immense popularity of Tower systems has left a lot of people looking for ways of connecting external keyboards to their A1200s. The simple way is to get an interface, such as the ones from Ateo, Micronik or Eyetech, which will allow you to use PC keyboards. PC keyboards are amazingly cheap and very easy to get hold of. Quality is variable but choice is vast. However there are a fair few people who have an A2000 keyboard and want to use that, or just don't like the idea of using a PC keyboard because of their associations with Bill Gates, Big Blue and the Men In Black from Intel.

A2000 keyboards have 5 pins on their DIN plugs but one is not connected. The other 4 are +5v and ground, both of these can be fed from the floppy drive connector, and the other two are clock and data lines. These can be connected to legs on a couple of the chips on the motherboard and hey presto, your keyboard is wired up. There are a couple of legs on one of the chips which may cause interference, some people have found it necessary to de-solder these legs and lift them off the board, others have found it OK to leave them in place.

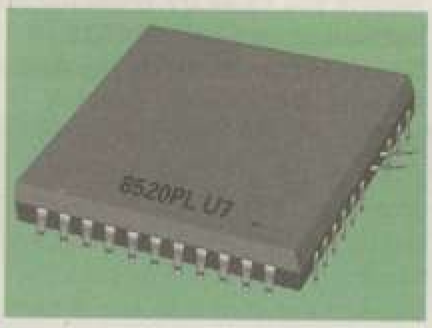
The safest way to do this – if you are not too keen on soldering – is to get a 5 pin DIN socket, a 44 pin PLCC socket and four wires. Instead of soldering the wires from the DIN plug to the chips legs, put the PLCC socket upside down on chip U13 and solder the wire to the appropriate pins on the upturned socket. You can just solder straight to the pins but it is very fiddly work, and you have to be careful not to let the chip get too hot. The upturned sockets make life a lot easier.

To be honest we'd advise a commercial option. It may be more expensive, but PC keyboards are cheaper and it will save money in the long run. It's also much safer and much easier. However, if you insist, then now you know how.

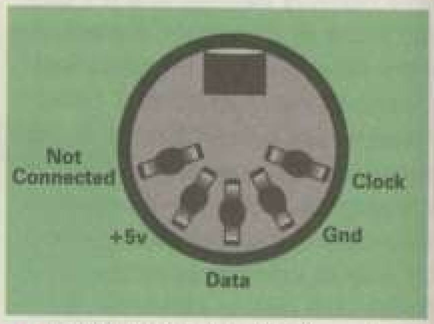




▲ **The keyboard power, data, and clock lines can be taken from the chip shown and the floppy drive power header. Ensure you connect to the correct pins!**



▲ **You may need to cut the old lines on the 8520 as shown. Many people seem to cope without doing this though.**



▲ **An A2000 keyboard socket. Use a standard 5 pin DIN socket and connect the pins to the chips and floppy power connector.**

you can get yourself a hard drive. Micronik do internal and external jobs, which makes life a lot easier if you transfer a lot of files across platforms. Blittersoft (01908 261466) distribute them in the UK.

The best Pascal option is HighSpeed Pascal from Oregon Research. Call Hisoft (0500 223 660) to order a copy. This claims to be totally Turbo Pascal 5.0 compatible, and CU Internet mail list subscriber Thomas Gower of the department of Physics and Astronomy, University of Oklahoma told us that it was fine for almost all his class projects when he did a 4 year Masters in computer science.

Pascal is an old language mostly only popular in academic circles. It has strong logic and strong handling facilities and requires a tight discipline which is why it's a good language to train computer students on. Thomas Gower can offer further advice by E-mail on gower@mail.nhn.ou.edu.

2. Yes, you do need a MIDI interface, but that's not all. You also need a MIDI instrument to plug into the MIDI interface. Music X will play Amiga samples in addition to MIDI instruments, but when you convert a MIDI file to a Music X file, it will want to play the various parts on a MIDI instrument. The conventional way to do this is to get a MIDI interface and preferably a General MIDI instrument. This will have all the sounds you need for most music, including drums and percussion.

Alternatively, if you don't mind a bit of soldering, why not go ahead with Project XG, our DIY sound card project from the September issue. That will do the job for far less cash and you won't even need a MIDI interface.

3. Tricky to say without more information. Power supply problems are our favourite answer. Overstrained power supplies cause lots of crashes.

Although your hard drive shouldn't cause strain, if you have an accelerator too, or if your PSU is a bit old, this is a very likely fault. Unplug any extra peripherals and see if the problem goes away. If it does, you'll need a new PSU.

Various people will sell more powerful PSUs, but PC tower cases come with big hefty PSUs and can be converted quite easily to power an Amiga. See our May issue's 'DIY Tower' article for details and ring someone like ICS (01474 533500) for parts.

A to Z

Kissing goodbye to FAQ, we introduce the first part of a new A-Z guide to Amiga jargon, brought to you by John Kennedy.

A is for...

A500
The first affordable Amiga, it followed on from the A1000 and was launched in 1987. Came with integral keyboard, a 68000 processor, 512K RAM and 512K ROM. There was a trapdoor expansion for adding extra memory, and a slot on the side for hard drives, more memory, video capture cards etc.

A600
Launched as an improvement to the A500, instead of the little brother of the A1200. Many A500 owners upgraded thinking they were getting a better machine, and instead found their expansion plans very limited. One good thing: it had an integral IDE hard drive interface.

A1000
The first Amiga computer, launched in 1984. Separate keyboard, 68000 processor and 256K of RAM. Graphics, sound and multitasking graphical operating system put it way ahead of the competition.

A1200
Most popular Amiga, an all-in-one unit featuring AGA chipset and a 68020 processor. 2Mb of memory as standard, and Workbench 3. Trapdoor makes expansion easy, and internal IDE interface and PCMCIA slot for other goodies.

A1500
Cut down version of the A2000 for UK market only, with two floppy drives instead of a hard drive.

A2000
Similar to A500, but in big box with separate keyboard. Box had Zorro expansion slots, as well as PC style ISA slots for use with a Bridgeboard. A 68000 processor and 512K RAM as standard, but memory and hard drive expansion is possible.

A2500
US only version of A2000, with an accelerator card as standard.

A3000
Big box Amiga, launched in 1990, with 68030 as standard. Build in SCSI interface, flicker-fixer and release of Workbench 2. Excellent machine, only the high price and the continued success of the PC prevented world domination.

A4000
First Amiga with AGA chipset, the A4000 was available in 040 and 030 versions. Big box style, with Zorro slots and easy memory expansion with on-board SIMM sockets. Hard drive and at least 4Mb of memory as standard. Processor on daughterboard. However, this was not the machine originally designed to be the flagship Amiga and suffered from many design flaws.

Accelerator
Any card which speeds up a computer. Although memory alone sometimes does this, typically an accelerator features a faster processor than currently installed in the host computer.

AddBuffers
An AmigaDOS command which allocates memory to be used as a cache or buffer to make access to disk drives faster.

AGA
The major overhaul of the Amiga's custom chips lead to the AGA chipset, offering 16 million colours instead of 4096. Built into A1200, A4000 and CD32. A much welcomed improvement.

Agnus
Custom Amiga chip used in non-AGA Amiga computers to control the display, the Blitter and DMA. Revised into Fat and Fatter versions dealing with more memory.

Alert
A warning message, displayed by either the operating system (perhaps memory is low, or a program has crashed) or an application (reporting a warning about being unable to save a file for example).

Amiga
The best home computer. Launched in the 1980s, still going strong today.

AmigaDOS
The Disk Operating System which is used by the Amiga to store and retrieve information.

Amiga keys
The two keys on either side of the space bar. Used as an extra set of Shift or CTRL keys to provide extra functions. For example, using the Right Amiga key and M will swap the current screen for the one behind, making it quick and easy to switch between applications.

Anim
A file-format, part of the IFF family, used to store animations. An animation consists of a series of separate images, when displayed in order they give the impression of movement. There are variations of ANIM files, including ANIM5 and ANIM7. There are advantages and disadvantages to each, and ANIM5 is the most basic and therefore most widely supported.

ARexx
A programming language included as part of the Amiga operating system distribution. Not only is it possible to write programs using ARexx, but as a macro it can also be used to enhance the facilities of other Amiga programs. ARexx can also be used to combine the features of separate programs.

ASL
A library designed to provide standard file requestors for application programs. Makes it easier for the programmer to provide a more reliable way of obtaining filenames (for example) and gives the user a consistent interface.

Assign
An AmigaDOS command which creates a new logical device equivalent to an existing physical or logical device. For example, if you ASSIGN floppy: df0:, then any mention of floppy: now refers to the floppy disk drive, df0:.

Attributes
Every file has attributes, and these define if the file can be read, deleted or written to. These 'bits' are set or reset using the AmigaDOS command Protect.

Audio
The Amiga has four sound channels, each of which can replay an 8-bit audio sample. The sound output is available at the back of every Amiga model via two phono-style sockets. The sound needs to be amplified before it can be heard, either with battery-powered speakers or a hi-fi. The audio is also combined into the RF signal from the modulator on various Amigas, which allows the sound to be heard through a TV set.

Avail
An AmigaDOS command which returns the amount of memory currently in use, and the amount of memory currently free.

Backchat

Make yourself heard. Send your views and opinions to Backchat, CU Amiga, 37-39 Millharbour, Isle of Dogs, London E14 9TZ, UK. Or E-mail to backchat@cu-amiga.co.uk

Tongue-twisted

Can you tell me, please, how Petro Tyschtschenko's last name is pronounced? It's difficult to discuss the worthy gentleman when you don't even know how to say it. And it's hardly right to just call him Petro, is it? He's been something of a hero to the Amiga over the past year or two, so he deserves a little respect doesn't he? Embarrassing as it is to admit, I just can't make headway with all those consonants in the middle. Please help.

Allan D Burrows, Canada.

We've settled on the following: "Petro Tish-cheng-koe" and he hasn't objected to it so far.

▲ **Amiga boss Petro Tyschtschenko spells it out – his name, that is.**

Tower treat

Hi, it's me again. But now I'm the proud owner of an Amiga 1200 tower. Putting it in a tower was the best present I could ever give my Amiga. It's opened up a whole new world of expansions and add-ons: cheap Zip drives, CD-ROM drives, hard drives... the list just goes on and on.

Not only have I given my Amiga a better place to live, it also has a new keyboard, CD-ROM drive and a 200 watt power supply. It's amazing what you can achieve by replacing a 23 watt supply with one ten times the power isn't it? The best thing is when you get your friends round, put them in a room with your Amiga, and watch them drool all over it.

The only thing it doesn't have is an Amiga badge. Is there any chance you can give me one of those nice stickers which were on your towers? Please, please, please...

Jamie Sweeney, W Yorkshire.

Not sure if we've got any of those stickers left... we'll see what we can do.

An elite force

Why can't big name developers stay with Amiga? They'll make enough money on other consoles and computers to produce games on Amiga, even if they don't sell. So it's ClickBOOM who are left to do it, with their wish list. I hope those games will make it to Amiga.

I try and help my friends and others around my area of Birmingham to consider buying an Amiga, being as they are cheaper than PCs and you can do lots more than just play games on them.

The Amiga users are an elite group of people. It just makes so much sense to buy an Amiga even if it is second-hand. I see second-hand A1200s for sale with a monitor, printer (inkjet), hard drive, CD-ROM drive, accelerators and 100s of games for just £250-£300.

Are the people selling them mad? No, it's just not the hip thing to have Amigas anymore. What I say to people like that is b******s to you, if you're not smart enough to stay with the Amiga then there will be someone else who will buy one. What I say to everyone is buy an Amiga, or keep your Amiga. If you are thinking of selling it, DON'T.

The Amiga is the perfect computer. Consoles can only play games and PCs need upgrading every three months, so buy an Amiga and join the elite.

Darren Morley, Birmingham.

While we totally agree with your sentiments, you must be realistic about game publishers returning to the Amiga as a major format. The argument that they will make money from other platforms, so they will be able to afford losing money on Amiga games is based on pure fantasy.

Companies must make money in order to exist. No company in its right mind would deliberately publish games at a loss. The Amiga scene is not a charity.

We must face the fact that there are far fewer Amiga users now than there were five years ago. The Amiga is no longer the first choice of gaming platform for most people. Pretending everything is as big as it was then will get us nowhere.

That's not to say it's impossible to develop and sell Amiga games whilst still making a profit. It's just a bit more of a specialist job these days. The big names will only return when two things happen:

1. the Amiga hardware advances far enough to compete with current PCs and consoles, and...
2. its user base grows so give them a large enough market to which to sell their games.

Shelling out

Your feature 'Power Gaming' in the August edition of CU Amiga was great! For me it seems like the Amiga market has turned – more and more developers are making more and more games and utilities, and only one problem remains: people don't buy them!

I recently read that the extremely promising looking strategy game Foundation will only need to sell about 4,000 copies for the publisher and the author to both make a healthy profit, which I think shouldn't be too much of a problem for such a stunning looking game even in the Amiga market. However, some games require a team to work on them and a single programmer with a few people helping him/ her isn't enough. FMV and CD-quality audio is becoming more and more important, as it is standard on other platforms. The Amiga needs to follow suit, but it's not that cheap to do.

Good actors and musicians cost a lot of money to hire. So does all the equipment needed. Some game authors only have access to a plain A1200, or maybe even an A500 and need more if they are to develop 'high end games' that require 030/040/060 or even PowerPC in order to run smoothly. So what can we do about this?

Well, we can *buy* their games! Very few people do so today. OK, I understand that games are expensive, and that they are not always as good as they looked on the ads. So what? First of all, Amiga games are a lot cheaper than on other platforms, but most users of other platforms buy a lot more games than Amigans do. And it is better buying one game each year than none at all, which some people do even though they *play* everything that comes out! And about the advertisements... read the reviews instead.

You'll need a reliable magazine for this, but it's worth buying at least one every month. Although I do not always agree with CU Amiga's opinions, the reviews are generally well written and if a title is given more than 85% you can be quite sure it really is a brilliant game. Amiga games no longer sell 50,000 copies. 3000-5000 is more realistic for an average new Amiga game, but maybe we can make those numbers rise at least a bit?

We can make a difference, together. Don't say 'I cannot do anything alone', because you can. Your local Amiga dealer probably sells 10-20 copies of an average new Amiga game, so you can imagine how much difference only a few sales can make to whether they'll expand their Amiga shelves or replace all the games there with PlayStation or PowerPC games. Convince all of your friends to purchase a few games as well. Please!

There are people working their asses off to get the Amiga back on track because they love using the machine and want it to survive, but they need to survive themselves as well. When they release their masterpiece that they have worked on for many years they often find out that they only earn a pitiful amount of money – maybe about £2000-3000 each if they are a team and have a top selling title. Act now!

PS. Upgrade as well, if you can afford it, but buying software might be even more important.

Even Sandvik Underlid via E-mail.

Starting in C

Congratulations on the Storm C cover CD give-away and tutorial I've just browsed through. C is a language I'm just starting to get into, and I'm sure the tutorial will be of great benefit to me, once I get a little more knowledge of the more fundamental and machine-independent aspects of C. Hopefully, this will be soon, as a friend of mine is writing a series of c-by-email tutorials which cover everything about programming in C, right from the start.

AMIGA
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This is my one criticism of your tutorial... in it, you recommend for the beginners a 'good book' on C. Surely a tutorial encompassing the very basic elements of C would have been beneficial before running the current tutorial. Even one that runs alongside would, I feel, be an advantage. After all, I'm sure the number of C-proficient programmers is small in proportion to the complete C novices reading the magazine, the majority of which would prefer a monthly beginners tutorial in the language rather than having to purchase a book. How about it?

Chris Elsworth via E-mail.

The idea of our C tutorials is to get results fast enough to make the whole thing appealing. If we spend the first six months performing seemingly useless maths functions on meaningless numbers, is anyone really going to be coaxed into taking up C programming? That was why we decided to let the books deal with that side of things.

PowerPC™

True performance?

At last the Amiga seems to be finally heading somewhere. With various development projects underway it all looks increasingly promising for the Amiga's future, especially with the advent of PowerPC processors into the Amiga World. Seeing the PowerUP board in operation at the phase 5 and CU Amiga stand at the 'World of Amiga' show (well worth the visit) I was certainly impressed. However, I'm not convinced that they will perform how people may think.

" The way I see it the PowerPC processor and the 680x0 processor both share the same data bus, which would mean a significant slow down from the start because cycles would be wasted when switching between the two processors causing a significant performance hit.

This is perhaps the best way possible to integrate two processors of differing types on hardware and an OS that was never designed to achieve such a co-existence, but I just don't see how it can reach anywhere near the performance of a setup purely designed with a PowerPC processor in mind. Any PowerPC native application that called an operating system function would mean it had to switch to the 680x0 processor then back to the PowerPC processor.The same goes for any interrupts that are received.

Surely we will see quite poor performance from a PowerUP board if it isn't working alongside a graphics card? Are PowerUP boards really the performance we expect or are they just hype?

Ian Chapman via E-mail.

For anyone who missed out 'PowerPC is Coming' feature in the August 97 issue, as we explained then, the PowerPC and 680x0 CPUs will not be able to work simultaneously. Therefore for total integration with your existing Amiga system, a PowerUp card will need a PowerPC version of the Amiga's operating system. 680x0 code can then be emulated by the PowerPC. At the moment, executing PowerPC code requires the rest of the 680x0-based Amiga operations to stand still. With any luck we should see a PowerPC version of the Amiga's operating system by the end of this year.

Stateside regards

Hi. I don't know whether you know it or not, but many American Amiga users read your magazine here. Personally, I haven't missed an issue since 1993 and I am thrilled with the fact that I am able to purchase it at a local bookstore.

I've been wanting to compliment your magazine for some time now, so I've taken the time to write this E-mail now that I've upgraded from my

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old A2000 to my new A4000/040.

CU Amiga magazine is truly excellent. Your articles and features have been a service to not only the European Amiga users, but to the global Amiga market as well. Even though we have one last American Amiga magazine here, I refuse to spend $5 on a magazine the size of an informative pamphlet. Now that we are able to purchase the CD version of your magazine there is even more to look forward to.

Please keep up the great work and get rid of the floppy disk version. All Amiga users should have a CD-ROM by now.

Christopher Aymar, Pennsylvania.

Good to hear you like it. We've adjusted our international distribution in favour of CD issues now. However, we still sell a significant amount of disk issues in the UK. While we'd like and strongly encourage readers to get CD equipped, we are providing a service for Amiga users, rather than dictating to them what systems they should have.

Control freak

After all the problems over the last few years, it's nice to see something good happening to the Amiga. With Gateway 2000 buying them and phase 5 bringing out the PowerPC cards things are looking up. However after reading about the possible new types of games (Wipeout, Tekken etc) I feel one point has been overlooked: the games port. How could you even begin to control Wipeout with a two button joystick? Even with help from the keyboard it would be pretty much impossible.

I think it's about time we looked for a new standard, and ditched the old two button thing, after all it's been with us since the 70's, (Atari 2600). What I would like is something along the Nintendo 64 lines, with analog and digital controls.

▶ Nintendo 64 controller – a fitting role model.

Andy via E-mail.

Pukka presentation

I am just writing to you, on behalf of myself and my friend Steve Murray, to tell you about a presentation that we made as part of our University course-work.

Steve and I have been Amiga fans for ages (Steve got his A500 almost as soon as they were available) and we now both own A1200s with various expansions. Because of our liking for the Amiga, Steve suggested that, rather than use Microsoft Powerpoint to produce black and white slides to photocopy onto slides, that we used the Amiga. In the same set of presentations was a P75 running Powerpoint and using the same LCD projector. Can you guess which group had the better results?

While the PC screens were in a higher resolution – partly because it used the VGA connector to the projector, whilst the Amiga was connected to the Composite connector – even small animations on the PC (about 40mm by 40mm on a 14" screen) were jerky on the PC, while we Amigans were scrolling text and graphics around the screen and using smooth fades/ wipes between each slide. Our presentation was aided by graphs produced in Easycalc 2 (from one of your coverdisks) which were cut and pasted into Scala, via Dpaint.

The only downside to the presentation was, when it was all over, people came to us in awe and asked us how we got 'Powerpoint' to do that. It gave us a buzz to point to the A1200 on the desk. This story is proof that the Amiga is still superior in some fields. The Amiga does *not* live again – probably because it never died in the first place.

Andee Clarke and Steve Murray, Loughborough.

Loyalty lasts

Thank you very, very much (and times that by infinity) for getting TFX and placing it on CD. I am a subscriber to your brilliant mag and I cannot wait for it to be pushed through the letterbox! My subscription is due for renewal very soon, and by doing things like this, and in general creating a well balanced read and producing what I think is the best of the two CDs, there is no doubt in my mind that I will be subscribing very soon again!

Keep it up. Thanks yet again, and thanks for sticking 110% with the Amiga. All credit to you.

Stephen Thwaites via E-mail.

Good man! Taking out a subscription to CU Amiga is a sound move. Not only do you get it before it hits the shops, you also get the chance to take up one of our excellent subs offers. At the moment we are offering 12 issues for the price of 9! Check page 103 for full details.

Stuck on CU...

Good grief, your magazine is amazing. I mean how do you make every little detail so perfect? Your CDs are by far the best, your content is the best, your look is the best, your web page actually works... everything, even the glue you stick the CDs on with is the best. You can play with it for hours sticking it to things, pinging it at your sister, you can even stretch it to varying degrees and ping it with your chin and you have a brilliant musical instrument. Hurrah!

Mark Bollons via E-mail.

Believe it or not this is actually a real letter. Thanks Mark. We do try our best.

Turbo is tops!

I just had to write and thank you for putting TurboPrint 5 Lite on your CD.

I've had my BJC600 over four years and thought I was getting the best possible printouts using the Canon Driver. I've tweaked and upgraded the software over the years but was unhappy at the unacceptable 'banding' on the higher quality printouts. I Tried TP5 more out of curiosity than the hope of improving my printouts. What a misconception! The printout was so good, I didn't believe it was the same printer. I sent off for the cheap upgrade to the full version the same day!

I am so impressed with the software, it shows that the Amiga is perfectly capable of producing quality printouts.

Russell Butler via E-mail.

To the Point...

E-mail pen pals

I notice that you get lots of letters from people all over the world. Can you do a one off E-mail penfriend page for those interested? Thanks... keep up the good work

Graeme Wakerley, Kingswood.

That's not a bad idea. Did you know we ran an Internet mailing list for CU Amiga readers? You can subscribe to it (for free of course) directly from our web site www.cu-amiga.co.uk.

Korny features

Well done to Andrew Korn for an excellent Power Gaming article. It is just about the first time I have heard someone be honest about the current situation.

M Simpson, Ipswich.

D.I.Why?

I think this new DIY series is a crap idea. I am only 14 years old and don't have much access to soldering irons and hacksaws. I'm sure there are also plenty of adults out there who don't like fiddling about with resistors and 10k log potentiameters. You should have articles on avoiding drills and pliers and how to assemble things as simply and uncomplicatedly as possible.

Darren Purdey, Belfast.

The DIY projects so far have been fairly complex, but the next one will be a lot simpler. There shouldn't even be any soldering involved, and you can expect a pleasant surprise when it comes to getting hold of the bits.

Sixth Sense sadness

I was very annoyed at September 97's issue because of Sixth Sense Investigations. I don't own a CD drive.

Dominic Sloane-Murphy (age 8), Edinburgh.

You know the answer to this one, don't you? We made it clear that Sixth Sense Investigations was too big to fit on floppies. Sorry!

CU Amiga Magazine reserves the right to amend or edit letters submitted for publication.

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Points of View

CU
The Monthly Expert

Our Technical Editor writes an open letter to Jeff Schindler, the General Manager of Amiga International.

A short term solution to save the Amiga

by Mat Bettinson

Dear Jeff,

Every Amiga enthusiast has ideas on what Gateway and Amiga International can do to save the Amiga. Here I'm restating the greatest recurring theme of Amiga enthusiasts suggestions.

State of disrepair

The 'stock' Amiga hardware and software scene is in a pretty sad state of disrepair. Most Amiga enthusiasts are running an impressive array of third party hardware and software which shores up the gaps. It takes time and experience to create a 'kick-ass' Amiga, so how about Amiga International providing us with one as standard?

As it will take a long time to create a new Amiga, the short term plan, as we know it, is to license third party Amiga developers such as Micronik and Index Computers, letting them create offically badged Amiga compatible hardware like it should be. There's little chance that a significant OS upgrade, even when it does come, will catch up with current developments.

The third party add-ons in use by Amiga enthusiasts today were written by many individuals, experts in each field, over the course of years. This shareware scene has kept the Amiga alive.

I propose that to get the Amiga off to a running start, Amiga International take the current state of a 'kick ass' Amiga and snapshot it into officialdom. How this will actually work is that Amiga International will provide official archives that Micronik, Index and One Man Amiga Construction Limited can install onto hard drives as standard on all new machines. This software turns the Amiga from a good machine into a bloody fantastic machine, costing practically nothing extra to boot.

We're talking about Workbench 3.1 and a proper icon/cosmetic scheme, some vital utilities and a TCP/IP Internet setup. It's easy to start ranting on what we each personally think should be bundled as standard but compatibility, commercial reality and the chosen direction of the R&D department will obviously need to be taken into account.

The software, whether it's the full version, and ultimately what overheads are acceptable needs to be decided by a body officially in charge of creating tђe snapshot. The whole lot can then be rebadged as 'AmigaOS Plus' or something.

"I propose that to get the Amiga off to a running start, Amiga International take the current state of a 'kick ass' Amiga and snapshot it into officialdom".

Next time someone *sees* what is being called AmigaOS, it will actually look like a modern computer. It won't look like the horrible four colour grey and white eyesore that's the stock Workbench 3.1 – still being shipped with Amigas today.

Radical driver & RTG

More radically, driver and RTG subsystems such as CyberGraphX and AHI could be supplied. It will have a major impact if all future software *has* to support the enhanced features. Software will have no choice but to take advantage of the hardware which licensed hardware producers may build in.

Controversially, I also believe Magic User Interface provided as standard can do nothing but take the Amiga forward, despite ingrown prejudices. There is nothing on any other platform to match the graphical power and ease of use for the user and programmer as MUI. If it's official, the Amiga will have the best GUI system in the world, full stop.

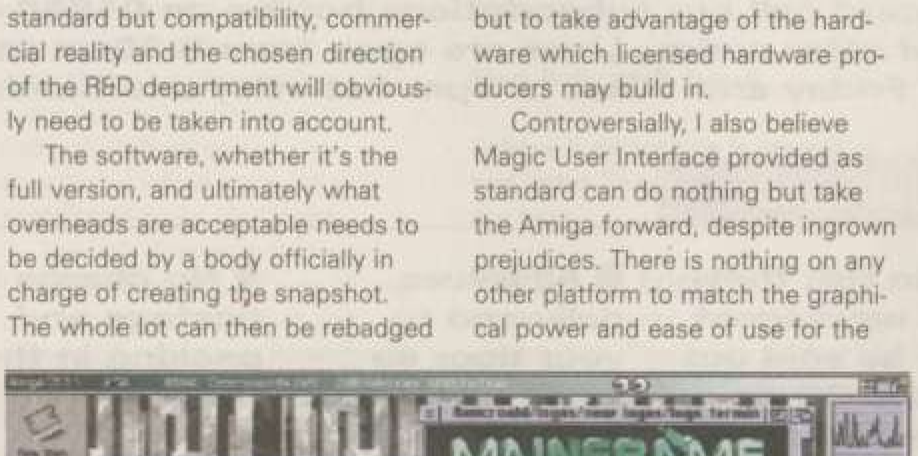
Imagine that new Amiga owners start here, and don't have to discover what to obtain to get a 'kick ass' Amiga. This is good and recognises those who've maintained the Amiga is a viable aquisition for Gateway 2000. Later on the third party software can be incorporated into the OS proper; aspects such as built-in Internet software, proper integrated graphics and audio RTG systems and so on. They can even remain API compatible with CyberGraphX and AHI. All due respect to AI's R&D, but they started yesterday where the authors of those subsystems worked years on their implementation. It's now time to recognise their efforts.

Tangible results

I believe Amiga International need to hire a panel of Amiga enthusiasts (who will provide a contact point for ICOA and other Amiga enthusiast think tank groups) and assign a budget to the project. With this, the die is then cast to produce real tangible Amiga enhancing results for the masses in a short time frame. I doubt there'll be a lack of applications for the post to head up such a group, as many CU Amiga readers would jump at the chance.

Thanks for your valuable time Jeff, I sincerely hope you give due thought to this idea from the collective of Amiga enthusiasts.

Mat Bettinson – mat@mats.net



▲ **Wouldn't it be nice if Workbench out of the box looked more like this.**

■ **Mat Bettinson is CU Amiga Magazine's Technical Editor.**

CU Amiga sales figures... a most encouraging trend

by Tony Horgan

August was a strange month. It always is. The summer arrived, half of the UK's population went off on holiday, and students around the country chewed their nails off waiting for their exam results. The magazine publishing business has its own 'exam results' released in August too – the official sales figures for the first half of the year – so we were just as nervy as the announcement date loomed. With many predicting the Amiga's downfall in 1997, sales of Amiga magazines are an interesting barometer of Amiga useage. Now that the UK Amiga magazine field has been narrowed to just two, some in the scene were predicting similarly gloomy results for CU Amiga.

However, despite the closure of two UK Amiga magazines already this year, the new officially certified world wide sales figures for CU Amiga for the period of January to June 1997 are most encouraging.

Our new average monthly sale is 27,391 copies. That's less than a 3% reduction on the sales from the second half of 1996. Even more encouraging for us, is that the figures also show that CU Amiga is now bought by more people in the UK than any other Amiga magazine. You can take a look at the official ABC (Audit Bureau of Circulations) web site for a full breakdown of sales, if you're that way inclined (www.abc.org.uk).

Six months ago, when our previous ABC figure of 28,161 was announced, I told my publishers (who are very nice people, I should add) that I was confident of maintaining those sales over the following period. As expected, the response was a friendly, slightly condescending pat on the head, based on the totally logical assumtion that the next figures would take a substantial drop, just like all Amiga mag circulations have done for at least five years. I knew the Amiga scene would be smaller and as a result, there would be fewer people to sell the magazine to, but despite this I still had a funny feeling...

"Our new average monthly sale is 27,391 copies. That's less than a 3% reduction on the sales from the second half of 1996".

Now, despite that 3% drop, I like to think I've kept my pledge, and that makes me a happy chappy.

I think don't think this is due to the widely believed theory of 'mopping up' readers from magazines which have closed. Rather it's a result of six months of incredible effort from a small but an extremely enthusiastic team.

I'd like to thank everyone who has helped turn CU Amiga into such a positive and progressive magazine. Moreover, and here comes the sloppy bit, I'd like to thank you all for buying it. Voting with wallets is the kind of self expression my publishers like.

You can be sure the next six months will see even more improvements in CU Amiga. We'll continue to bring you the best for your Amiga every month, and we'll also be unveiling a string of exciting new features, projects, cover disks and exclusives.

Once again, thanks for supporting us through these tricky times. It's appreciated.

■ **Tony Horgan is CU Amiga Magazine's Editor.**

The £400 Amiga is possibly a rather bad idea

by Andrew Korn

There is a lot of speculation and concern flying about as to what the future holds for the Amiga platform. One thing that worries people is the price. The Amiga is regarded as a cheap machine, and a lot of people think that all these wonderful ideas for hardware will make it an expensive machine, not in the spirit of the old Amiga.

The Amiga is thought of as a £400 computer, and if it comes with PowerPC, graphics cards, Caipirinha chips and so on, it isn't likely to remain as a £400 machine. Will a £1000+ Amiga still be an Amiga? With the prices of PC components tumbling, can the Amiga remain comparatively cheap?

Actually, when the Amiga first came out people moaned that it was too expensive. At 30% more costly than its main rival (the Atari ST) it won out none the less because people recognised it was worth paying more for the better hardware. It seems cheaper today, but we seem to forget inflation. If a new Amiga was launched today at £7-800 it would be comparable. A £400 machine would be possible, but the limitations of making a computer to fit a tight price bracket is what put us in this situation in the first place.

If the A1200 had been launched at a slightly higher price it could have been a tower system ten times as expandable as it is now.

What makes an Amiga appear cheap is what results can be achieved on a minimum specification machine. If future machines allow a good range of specification, there should be no problem.

Taking a look at the £400 price point, it rapidly becomes clear that it is just too limiting. No new computer should come without a hard drive, for instance. An '030 really is as low as we can go for a base CPU, though even that is like a false economy when PowerPC chips cost little more for vastly more speed.

It'll have to be a tower case so that we aren't all stuck with the same old DIY it or pay through the nose problems that plugging in such bog standard devices as CD-ROM drives causes us today. Plug in keyboards can then be industry standard, which is pretty convenient. Memory? Let's say 8Mb memory costs are so low that less is futile, it will save an irrelevant amount of money. Let's total it all up then. Case, keyboard, hard drive, floppy drive, cables, 8Mb memory, 68030, OS3.1... we're rapidly approaching the £400 limit already and we haven't got a motherboard and all those custom chips yet.

PCs are based on a motherboard which allows extras to be plugged in as desired, the reason why pricing covers such wide ranges. The Connect motherboard announced by Index should allow OEM manufacturers to offer Amigas varying from an 18Mb '040/25 big box Amiga with a 2Gb hard drive for around £750. Go up to a grand and a half and you're looking at an '060/66, 34Mb, CD-ROM, 4Gb hard drive, graphics card, modem and a 17" monitor.

That freedom of choice, rather than worshipping at traditional price points is what the Amiga really should be aiming for.

"The Amiga is thought of as a £400 computer, and if it comes with PowerPC, graphics cards, Caipirinha chips and so on, it isn't likely to remain as a £400 machine".

■ **Andrew Korn is CU Amiga Magazine's Staff Writer.**

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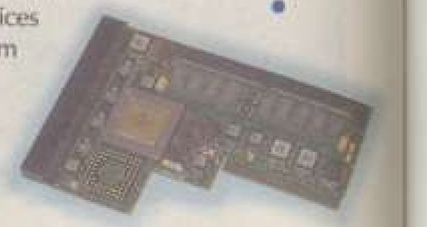

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